



Portable Multi-Gas Monitor
GX-6000

Data Logger Management Program
SW-GX-6000(EX)
Operating Manual

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Preface

The operation procedures and precautions mentioned in this operating manual apply only for the specified use of the program. We do not hold ourselves responsible for uses not described in this operating manual.

This operating manual will not explain the basic common operations of Microsoft Windows 7, Windows 8 , and Windows 10 , such as selecting commands or setting dialog boxes. First-time users of Windows should read the Windows manual in advance to learn common operations of the operating system.



WARNING

This product is distributed on a special type of CD called "CD-ROM".
Do not try to play this CD on a common audio CD player.
Ignoring this warning may cause loud noise, resulting in hearing impairment or speaker damage.



CAUTION

Necessity of pointing devices

This software requires pointing devices such as a mouse or touchpad.
Keyboard-only operation is not supported.

1-1. Purpose and features of this program

This program is used to download data collected by the data logger function featured in GX-6000 to a PC to use the data effectively.

There are the following advantages in downloading data collected by the data logger function:

- Gathered data can be viewed in a list.
- Gathered data can be viewed in graph and chart formats.
- Graph and chart data can be printed and stored on paper.
- Past data can be stored.
- Manual copying of data is no longer necessary.
- Able to know quickly which unit needs calibration, and perform calibration automatically.
- Able to manage more than one unit easily.



Notice

- Copying or duplicating the content of this manual without our knowledge, in whole or in part, is prohibited unless otherwise specified in law.
Due to the improvement of the product, the content of this operating manual might be amended without prior notice.
- It is necessary to agree with the Software License Agreement, separately provided, before using this product. Please consent that we assume you have agreed to this agreement when the package is opened.
- Utilization of the software other than for intended purposes is prohibited. If the operating manual is ignored when using the software, or the software is altered in any way, the safety and quality of the product might not be maintained. We will not be liable for any accidents caused by these conditions.

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Installation and Uninstallation

2-1. Precautions on operating environment

This program can be used on Microsoft operating systems Windows 7, Windows 8, and Windows 10. Please note that it cannot be used on other operating systems.

This program requires a maximum of 40 MB hard disk capacity when it is installed. Moreover, on operation of the system, it requires hard disk capacity depending on the amount of data. Please use the program with sufficient disk capacity.



CAUTION

Precautions on handling the CD-ROM

1. CD-ROM storage
Do not store the CD-ROM in a place exposed to direct sunlight or a place with high temperature and humidity.
2. CD-ROM drive to use
Avoid using a slot-loading CD-ROM drive.
The label attached on the CD-ROM might prevent CD-ROM from ejecting properly.
Use a tray-type CD-ROM drive.

2-2. Software installation

Insert a disk which stores data of the program to a CD-ROM drive of a Windows-based PC. After a while, an installation screen will automatically start.

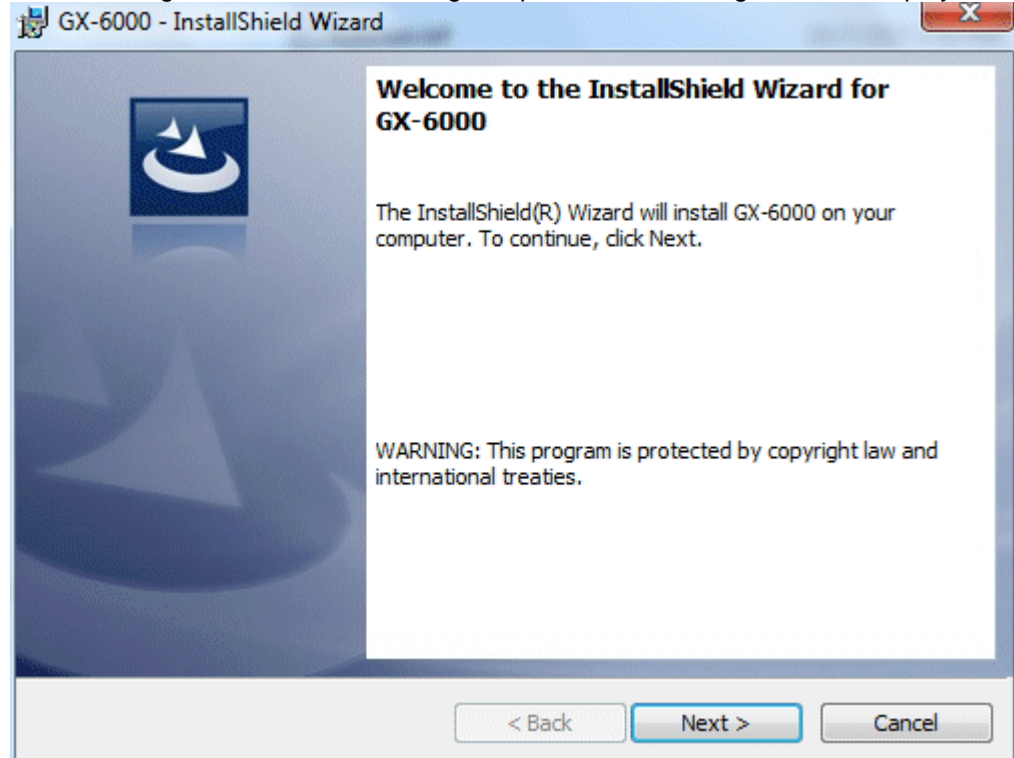
When the PC does not support the auto-start function of the CD-ROM, operate as follows:

1. From Explorer, open the CD-ROM drive.
2. Double-click the "setup.exe" file.

2-3. Installation procedure

- **Start the setup program**

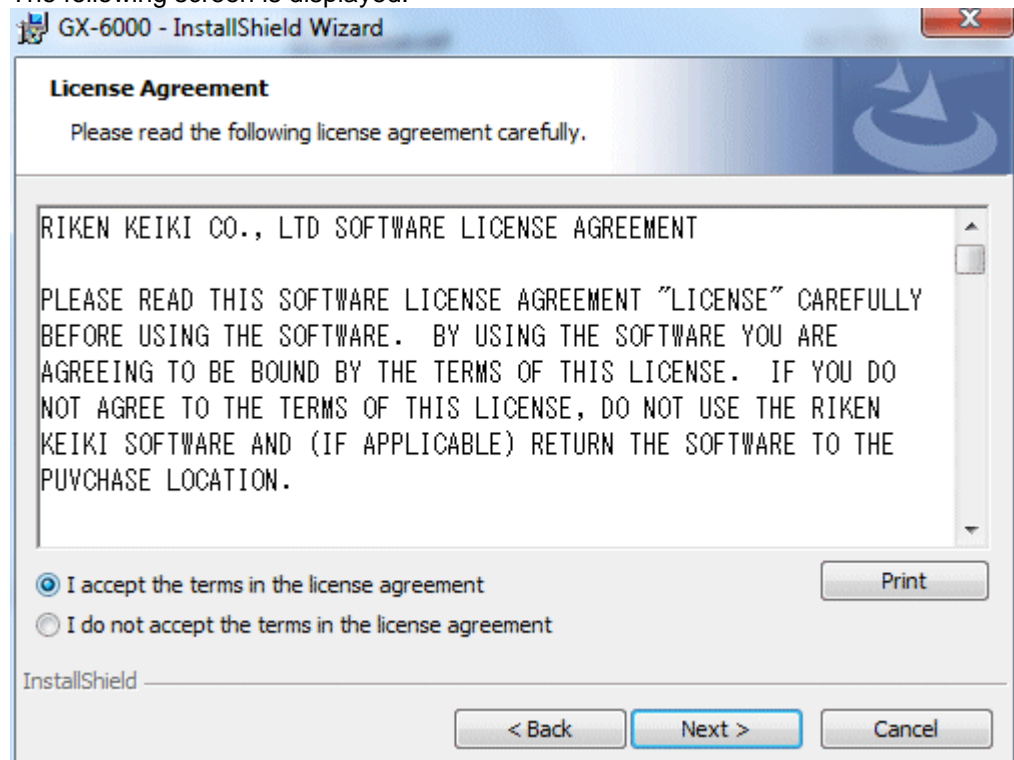
After inserting the CD-ROM or starting setup.exe, the following screen is displayed.



- **Accept the License Agreement**

Click the "Next" button.

The following screen is displayed.



Click the "Next" button to continue the installation, or the "Cancel" button to abort the installation.

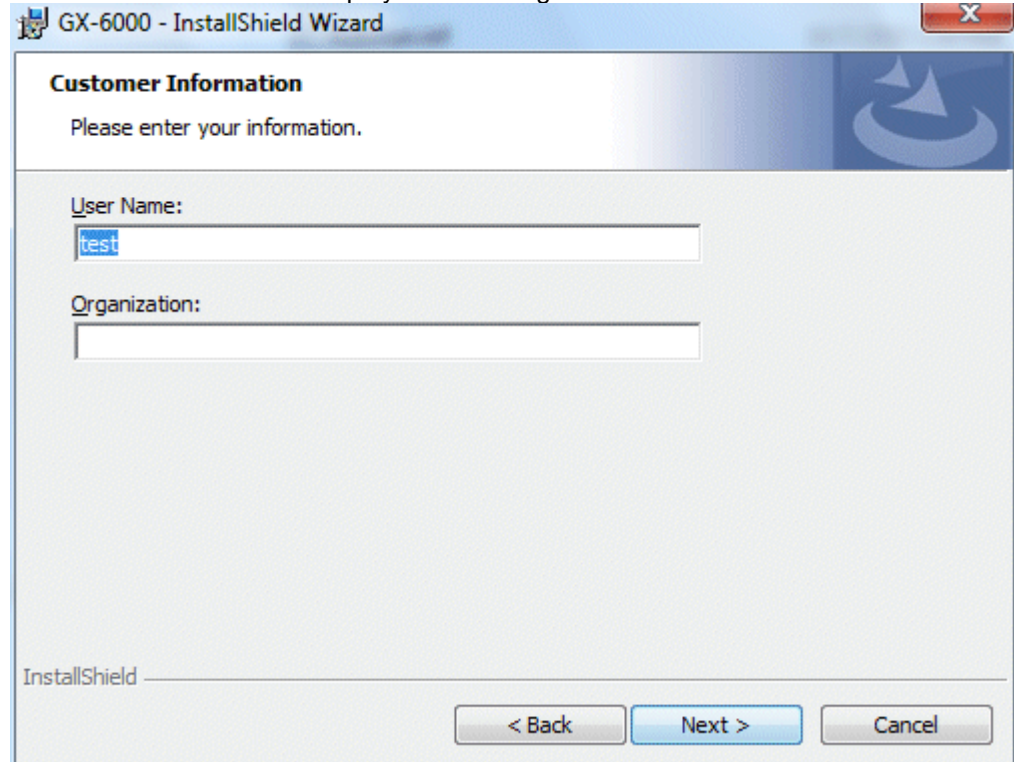


CAUTION

Fully understand the License Agreement before continuing with the installation of the software.

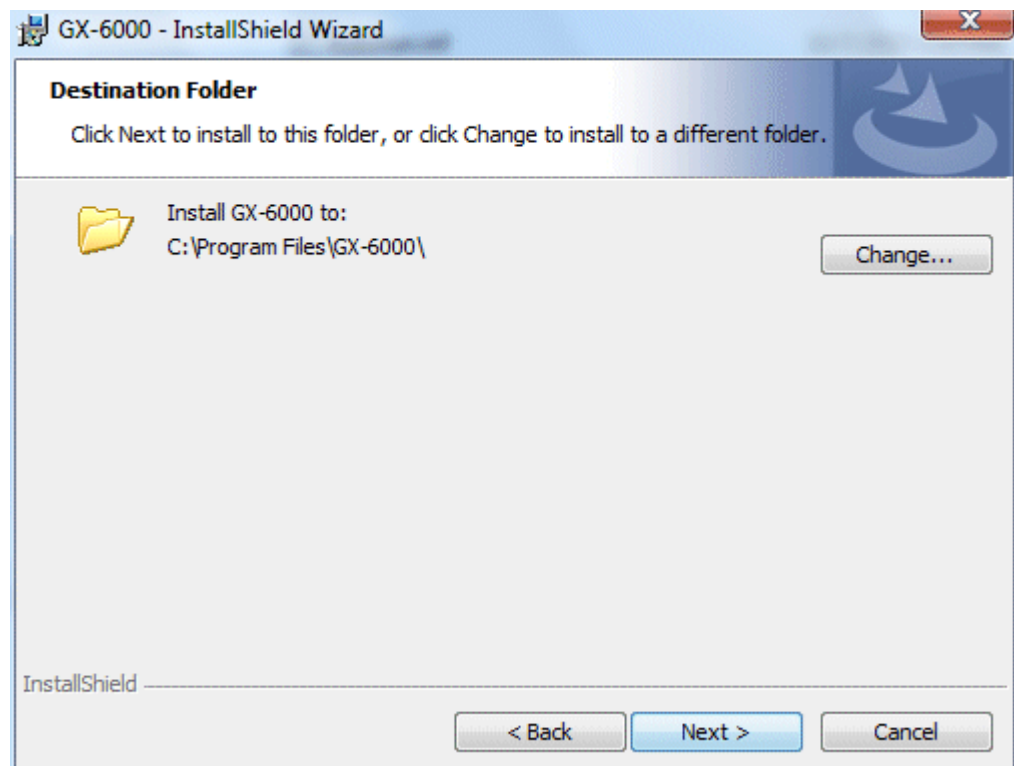
- **Customer Information**

Click the "Next" button to display the following screen.



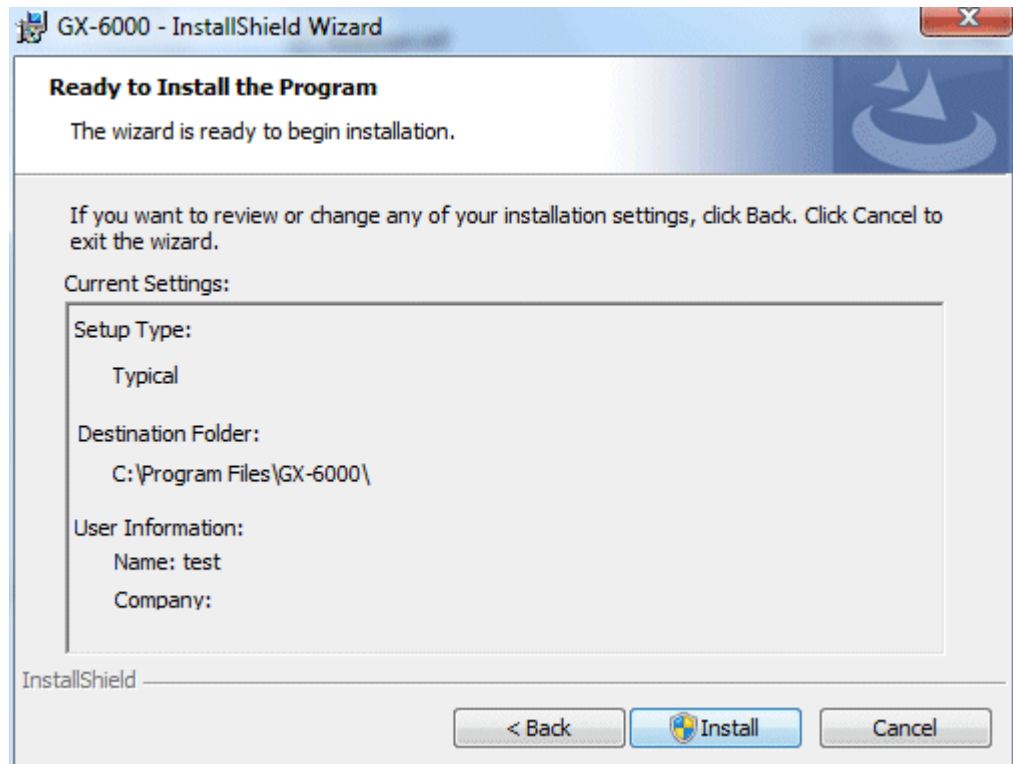
Click the "Next" button.

- **Destination Folder**



Click the "Next" button.

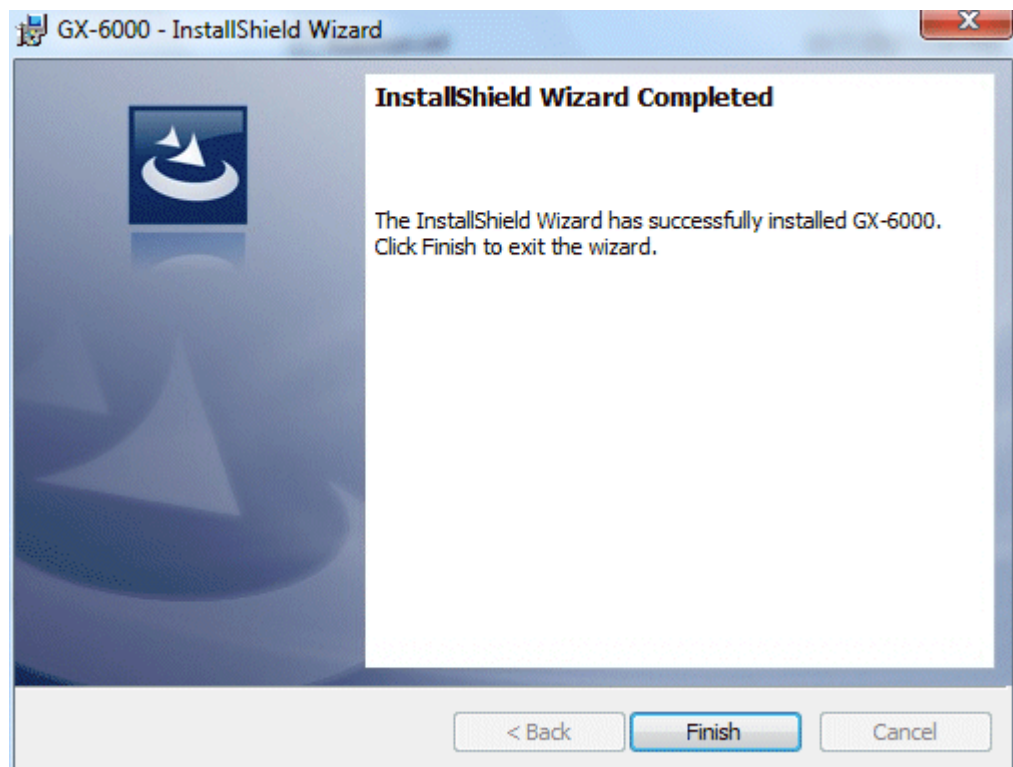
- **Start setup**



Click the "Next" button to start installation.

- **Complete**

When the setup process is completed, the following screen is displayed.



The program can be used immediately after setup.



CAUTION

Save past data for reinstallation

Please note the following when reinstalling the software:

1. Uninstall the software before reinstallation.
2. If the software is uninstalled after some operation, some files will remain on the PC. Of these files, GX6000.mdb is a database file. If past data needs to be saved, copy this file to a different location, and then delete the folder.



CAUTION

Precautions when installing on Windows 7/8/10

This software requires a library, which consists of files such as various drivers, installed on the Windows system. The files are installed automatically during the installation of the software. When using Windows 7/8/10, installation of the system library requires administrator privileges. In this case, follow the instructions to log in as an administrator, and then install the system library. After installation, a dialog prompts to restart the system. Restart, log on again as a general user, and install the application.

(Both the library and the application are installed by clicking setup.exe in the CD-ROM. Installation with an administrator privilege is required only when the required library is not installed in the system folder.)



When using the software under a network-connected environment

When installing on a network-connected PC running Windows 7/8/10, check the following points.

IrDA communication utilizes a subset of TCP/IP technology (the communication technology used for the Internet, etc.) and uses a special set of communication groups and IP addresses.

Because of this, some strong Internet security software might reject communication.

If possible, use a computer that is not connected to the network.

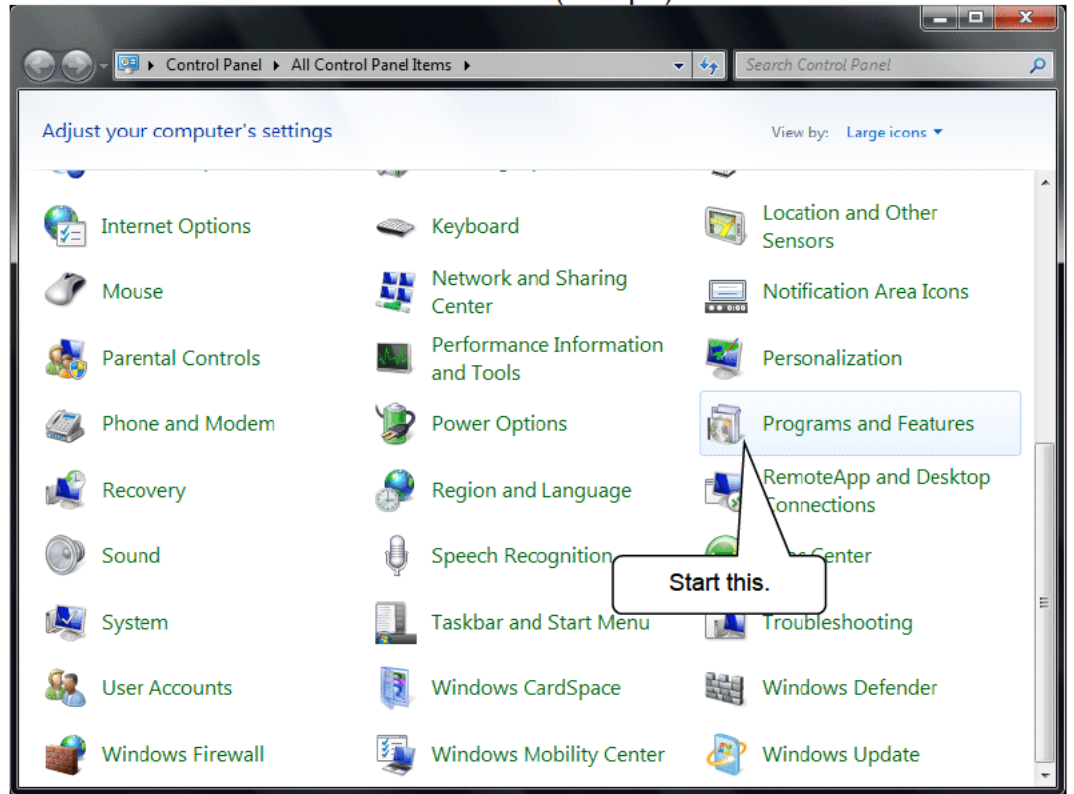
When using a computer connected to the network, use with sufficient considerations on security settings.

2-4. Uninstallation

- **Startup**

To uninstall the software, from the Start menu of the Windows bar, click "Settings" and then start Control Panel.

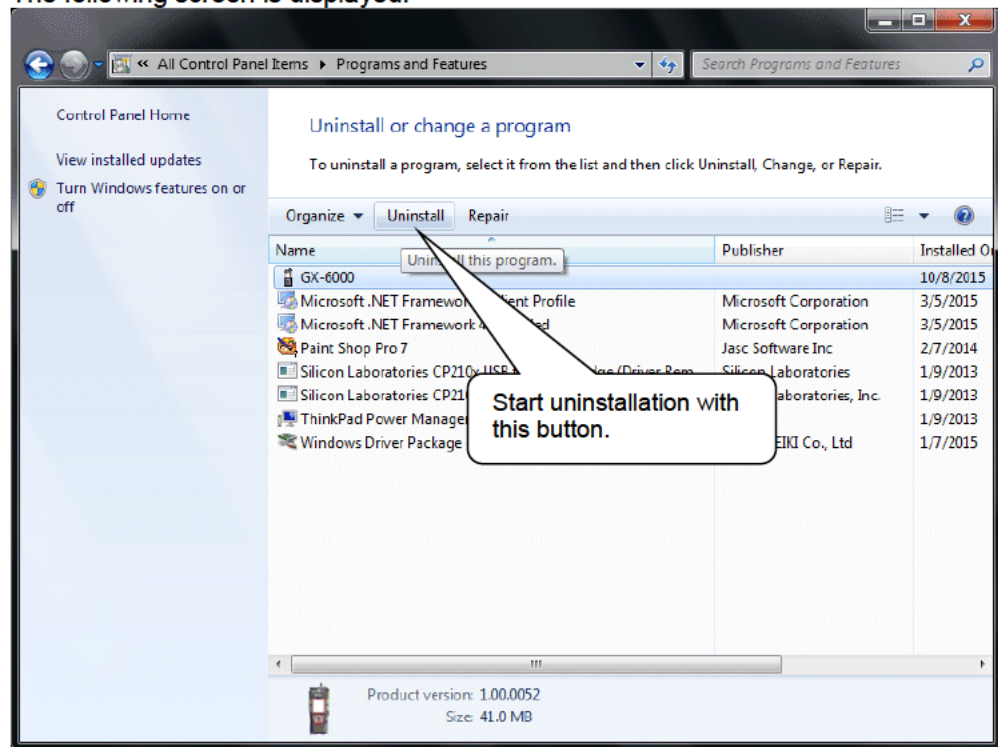
Control Panel (example)



From the Control Panel, double-click "Programs and Features" to start.

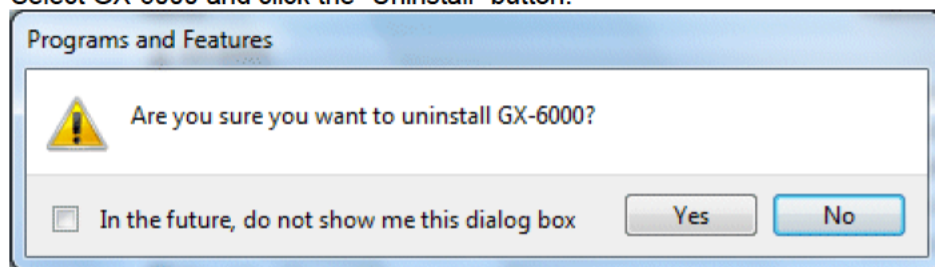
- Select GX-6000

The following screen is displayed.




- Start deletion

Select GX-6000 and click the "Uninstall" button.



Click "Yes" to start the uninstallation.

 **CAUTION**

A message, "Do you want to remove the shared file?" might be displayed during uninstallation. Select "No" to All. Selecting "Yes" to All might affect other applications.

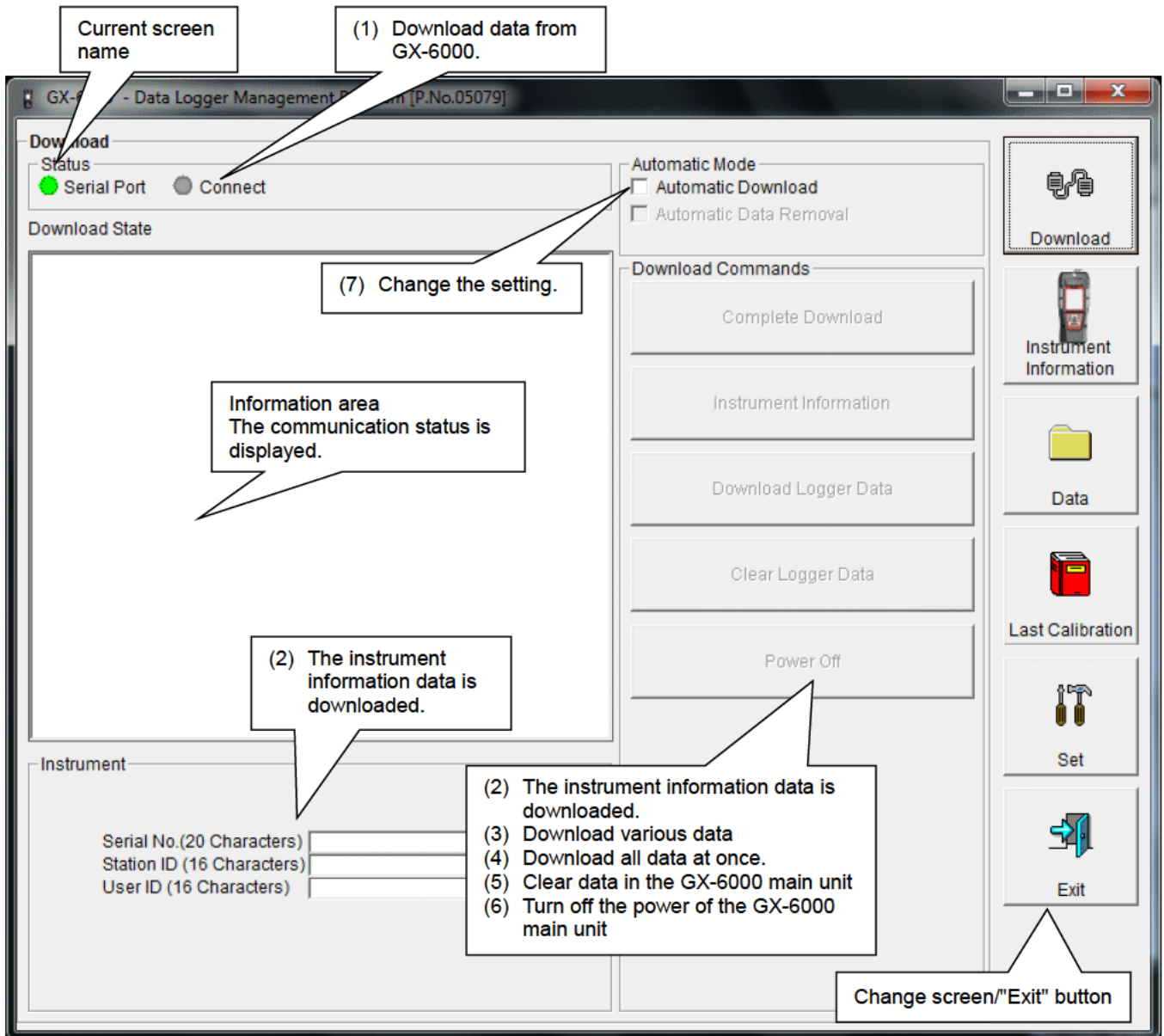
3

How to Operate

Double-click the GX-6000 desktop shortcut, or click the "Start Menu", select Programs and click the GX-6000 program icon.

3-1. Download screen

After the splash screen, the download screen is displayed.



To perform data communication, place the GX-6000 main unit to an appropriate position, and with the program activated, turn on the power of the main unit. The program automatically judges whether or not communication is possible. If possible, the PC will be ready to receive the data.

3-1-1. Download data from GX-6000

● Prepare the main unit

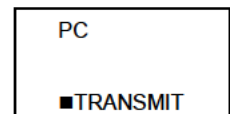
1. Start the software.
2. With the GX-6000 main unit powered off, move it to a position capable of communication.
3. Turn on the GX-6000 main unit.



CAUTION

Make sure to turn on the power of GX-6000 after placing it to a position capable of communication.
 Communication will not be established when it is placed at a position capable of communication with the power turned on.

The message will be displayed as shown on the right on the LCD screen of the GX-6000 main unit. →
 (Due to the display resolution of GX-6000, the message will be somewhat difficult to read.)



The following message is displayed in the Information Area.



CAUTION

If the content of the Information Area is different from above, turn off the power of the GX-6000 main unit, check the position of the unit, and then turn on the power again.

When communication is established, the Status area changes as follows.



Serial Port:

Communication available: Green (PC port ready)

Communication not available: Red

Connect:

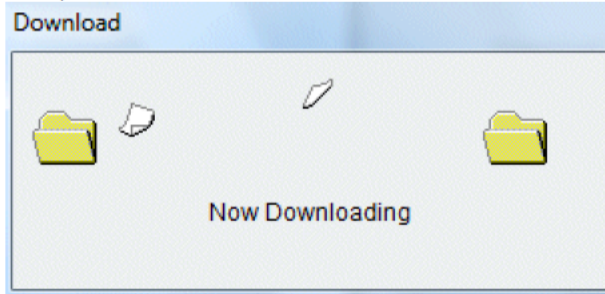
Communication ready: Gray

Communication in progress: Green

3-1-2. The instrument information data is downloaded

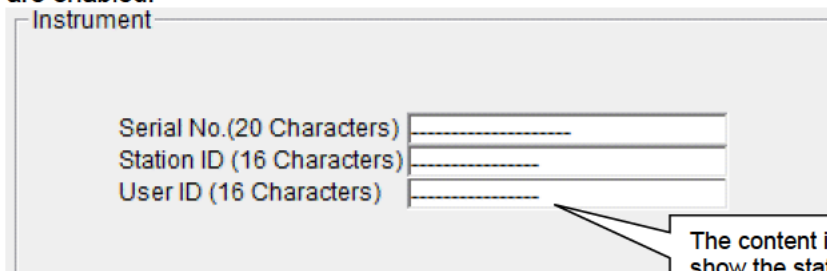
- Download instrument information

First, click the "Instrument Information" button to download instrument information data.

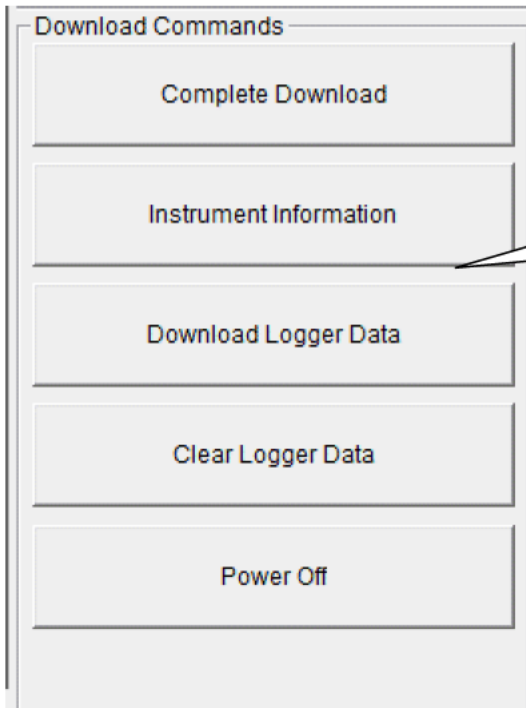


An animation is displayed during download.

When the Instrument Information data is downloaded, the content of the Instrument Information area is updated and the "Download Logger Data" and "Clear Logger Data" buttons are enabled.



The content is updated to show the status of the GX-6000 main unit.



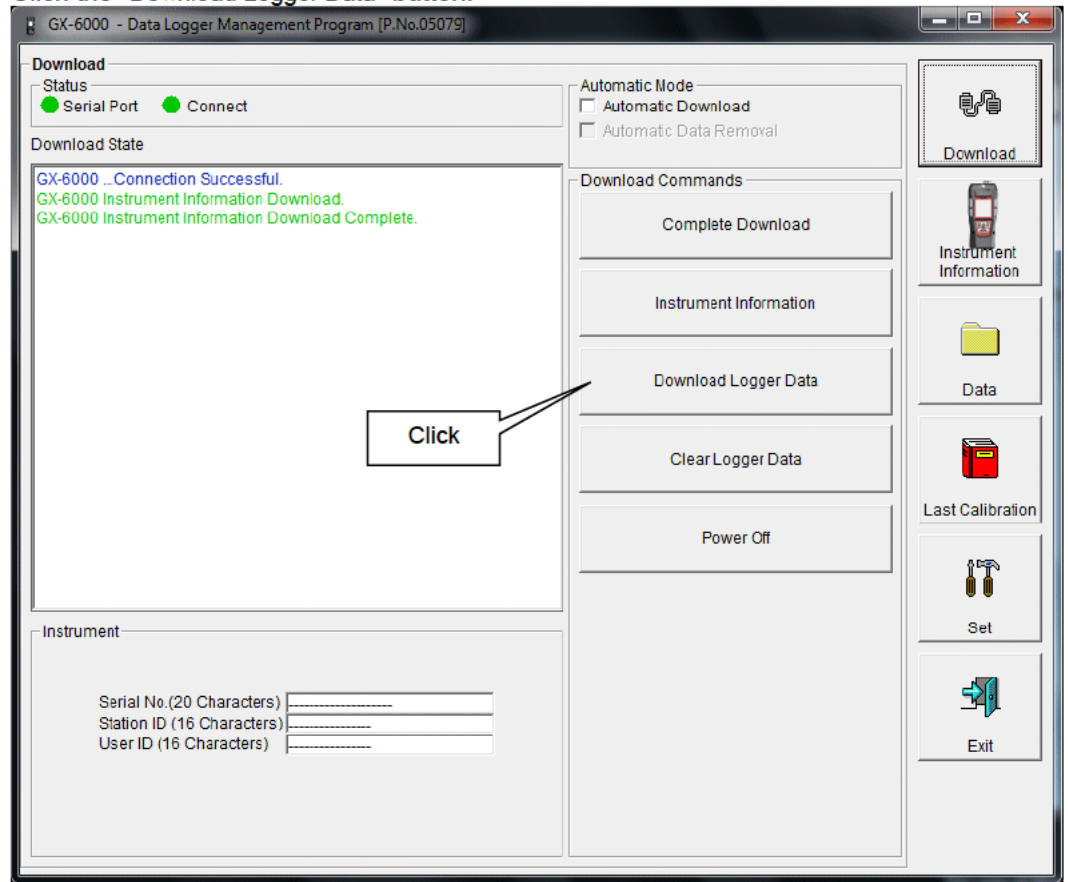
The "Download Logger Data" and "Clear Logger Data" buttons are enabled.

3-1-3. Download various data

- Trend data
- Event data

After the instrument information data is downloaded using the "Instrument Information" button, the "Download Logger Data" button is enabled.

Click the "Download Logger Data" button.



The download status is displayed in the information area.



CAUTION

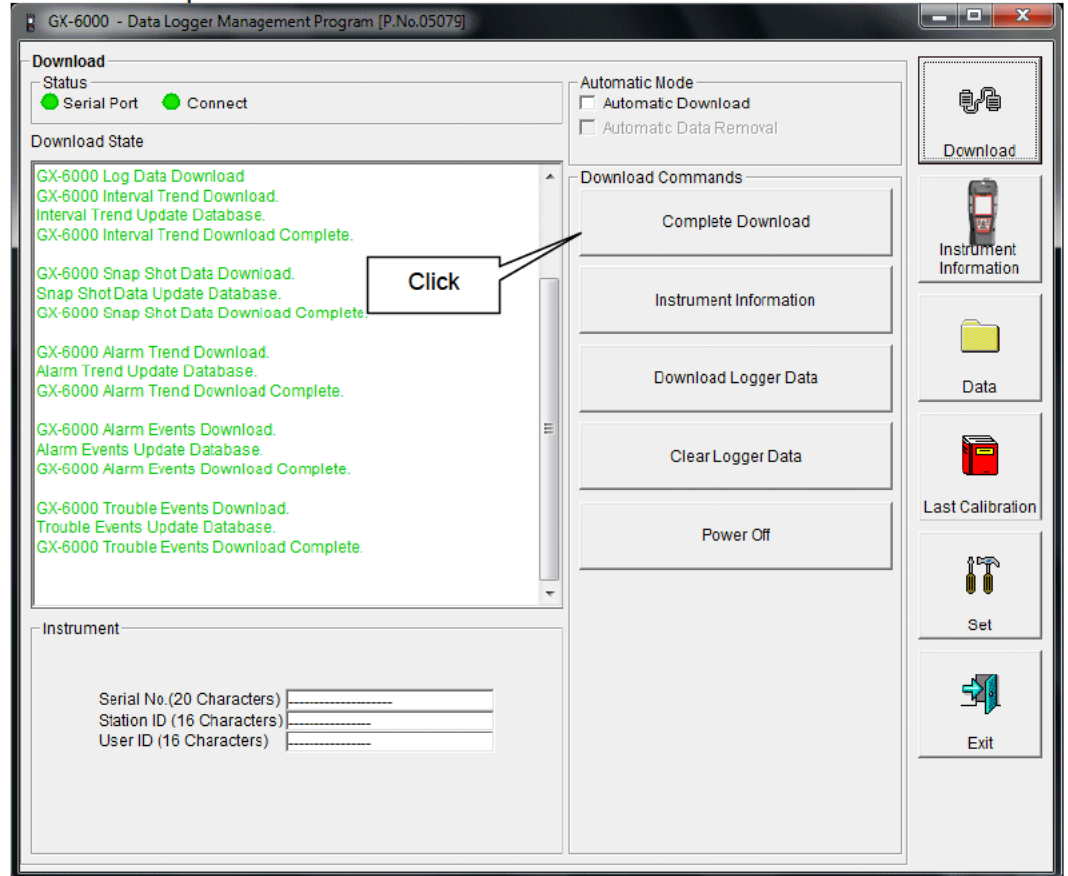
During download of each data, other data accesses are prohibited. Therefore, other download buttons and the "Set" button are disabled.

3-1-4. Complete download

- Complete download

The "Complete Download" button downloads Instrument Information, Interval Trend, Alarm Trend, Alarm Events, Trouble Events, and Power Events data at once.

Click the "Complete Download" button.



The download status is displayed in the information area.



CAUTION

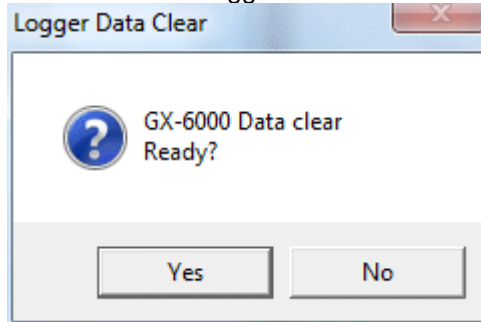
During download of each data, other data accesses are prohibited. Therefore, other download buttons and the "Set" button are disabled.

3-1-5. Clear data in the GX-6000 main unit

- **Clear data**

Use the "Clear Logger Data" button to delete various data stored inside GX-6000.

Click the "Clear Logger Data" button.



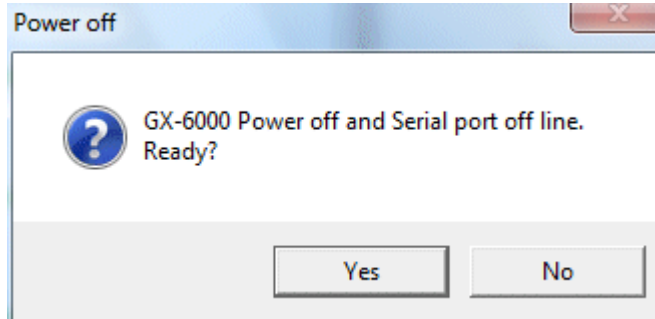
Click "Yes" to start clearing the data.

3-1-6. Turn off the power of the GX-6000 main unit

- **Power OFF**

Use the "Power Off" button to turn off the power of the GX-6000 main unit and initialize the serial port of the PC.

1. Click the "Power Off" button.

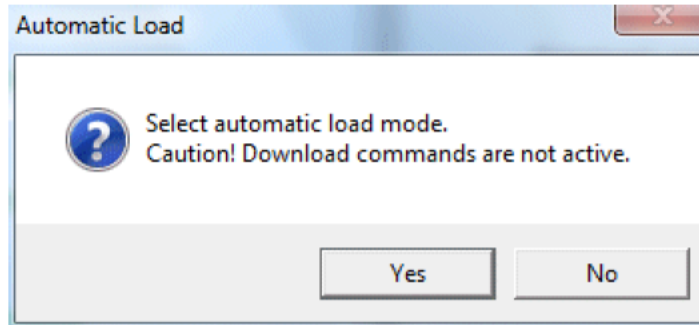
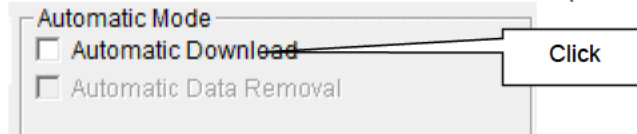


Click the "Yes" button to start the power off process of the GX-6000 main unit. After the serial port of the PC is initialized, it will be reset to the data download ready status.

3-1-7. Switch to automatic mode.

- **Automatic Download**

1. Mark the "Automatic Download" checkbox.(If not marked yet)



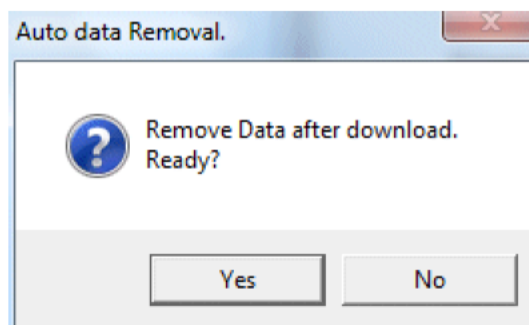
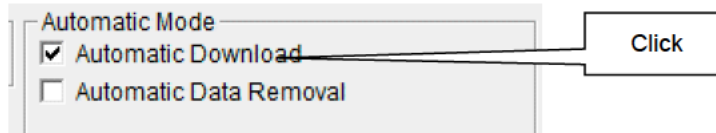
Click "Yes" to switch to "Automatic Download".
Click "No" to cancel mode change.

- **Automatic Data Removal**

In this mode, after the GX-6000 main unit is powered on, the PC automatically downloads complete data and then turns off the power of the GX-6000 main unit. During automatic download, manual download is not available.

When "Automatic Download" is used, downloaded data can be automatically removed after download.

1. Mark the "Automatic Data Removal" checkbox.



Click "Yes" to automatically remove data stored in GX-6000 after downloading complete data.

* This setting is useful for shortening download time when repeating download and data removal processes.

3-2. Instrument Information screen

Click the "Instrument Information" button at the right side of the screen to switch to the following screen. This screen lists instrument information data for the currently connected GX-6000 main unit.

(1) Data source type

(2) Status informatio

(3) Calibration history information

Click this button

Instrument Information [Completed]
GX-6000 Status

Serial No. (20 Characters)

Station ID (16 Characters)
STATION ID 001

User ID (16 Characters)
USER ID 001

Calibration History					
Gas	Calib.Date	Before	After	A.Cal.	Cal.Due(Da
CH4(100%LEL)	1/1/2015	0	0	50	Now
O2(40.0%)	1/1/2015	0.0	0.0	12.0	Now
H2S(100.0ppm)	1/1/2015	0.0	0.0	25.0	Now
CO(500ppm)	1/1/2015	0	0	50	Now
VOC(6000ppm)	5/11/2015 10:10:10 A	0.0	0.0	100.0	Now
----(---)	----	----	----	----	----

Last Bump Test				
Gas	Bump Test Date	Test Result	Concentration	mp Test Due(Da
CH4(100%LEL)	1/1/2015	0	0	Now
O2(40.0%)	1/1/2015	0.0	0.0	Now
H2S(100.0ppm)	1/1/2015	0.0	0.0	Now
CO(500ppm)	1/1/2015	0	0	Now
VOC(6000ppm)	6/12/2008 10:10:10 A	0.0	0.0	Now
----(---)	----	----	----	----

Warning and Alarm point				
Gas	Warning	Alarm	STEL	TWA
CH4(100%LEL)	10	50	----	----
O2(40.0%)	19.5	23.5	----	----
H2S(100.0ppm)	5.0	30.0	15.0	10.0
CO(500ppm)	25	50	200	25
VOC(6000ppm)	400.0	600.0	60.0	42.0
----(---)	----	----	----	----

Download

Instrument Information

Data

Last Calibration

Set

Exit

(4) Sensor alarm setpoint information



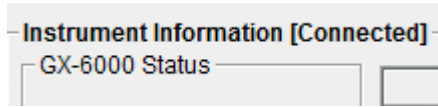
CAUTION

This screen is read-only. Modification of data is not supported. -> See "3-6. Set screen".
When the Instrument Information data is not downloaded, no data is displayed.

3-2-1. Data source type

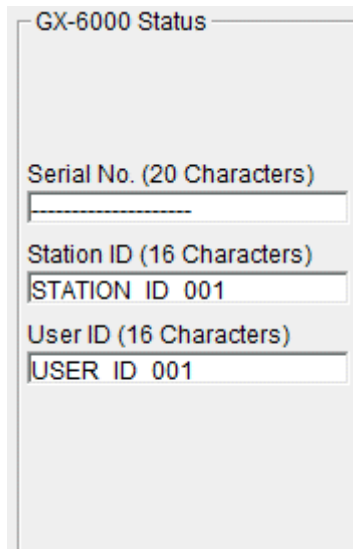
- **Data source information**

When the information of the multi-gas monitor main unit is displayed, the text [Connected] is displayed.



3-2-2. Status information

- **Information details**



"Serial No", "Station ID", and "User ID" stored inside the main unit are displayed.



CAUTION

This column is read-only. Modification of the data is not supported.

3-2-3. Calibration history information

● Calibration history details

Calibration History					
Gas	Calib.Date	Before	After	A.Cal.	Cal.Due(Days)
CH4(100%LEL)	1/1/2015	0	0	50	Now
O2(40.0%)	1/1/2015	0.0	0.0	12.0	Now
H2S(100.0ppm)	1/1/2015	0.0	0.0	25.0	Now
CO(500ppm)	1/1/2015	0	0	50	Now
VOC(6000ppm)	5/11/2015 10:10:10 A	0.0	0.0	100.0	Now
----(--)	----	----	----	----	----

Details :

- Gas : Measured gas name (full scale)
- Calib.Date : Date of last calibration
- Before : Concentration before last calibration
- After : Concentration after last calibration/calibration failure
- A.Cal. : Concentration for automatic calibration
- Cal.Due(Days) : Warranty operation time without another calibration (when the remaining time reaches 1 month, this item is displayed in red to indicate a warning)

● Bump test history details

Last Bump Test				
Gas	Bump Test Date	Test Result	Concentration	mp Test Due(Da
CH4(100%LEL)	1/1/2015	0	0	Now
O2(40.0%)	1/1/2015	0.0	0.0	Now
H2S(100.0ppm)	1/1/2015	0.0	0.0	Now
CO(500ppm)	1/1/2015	0	0	Now
VOC(6000ppm)	6/12/2008 10:10:10 A	0.0	0.0	Now
----(--)	----	----	----	----

Details :

- Gas : Measured gas name (full scale)
- Bump Test Date : Date of last bump test
- Test Result : Last test result concentration
- Concentration : Last test gas concentration
- Bump Test Due(Days) : Warranty operation time without another bump test (when the remaining time reaches 1 month, this item is displayed in red to indicate a warning)

3-2-4. Sensor alarm setpoint information

● **Details**

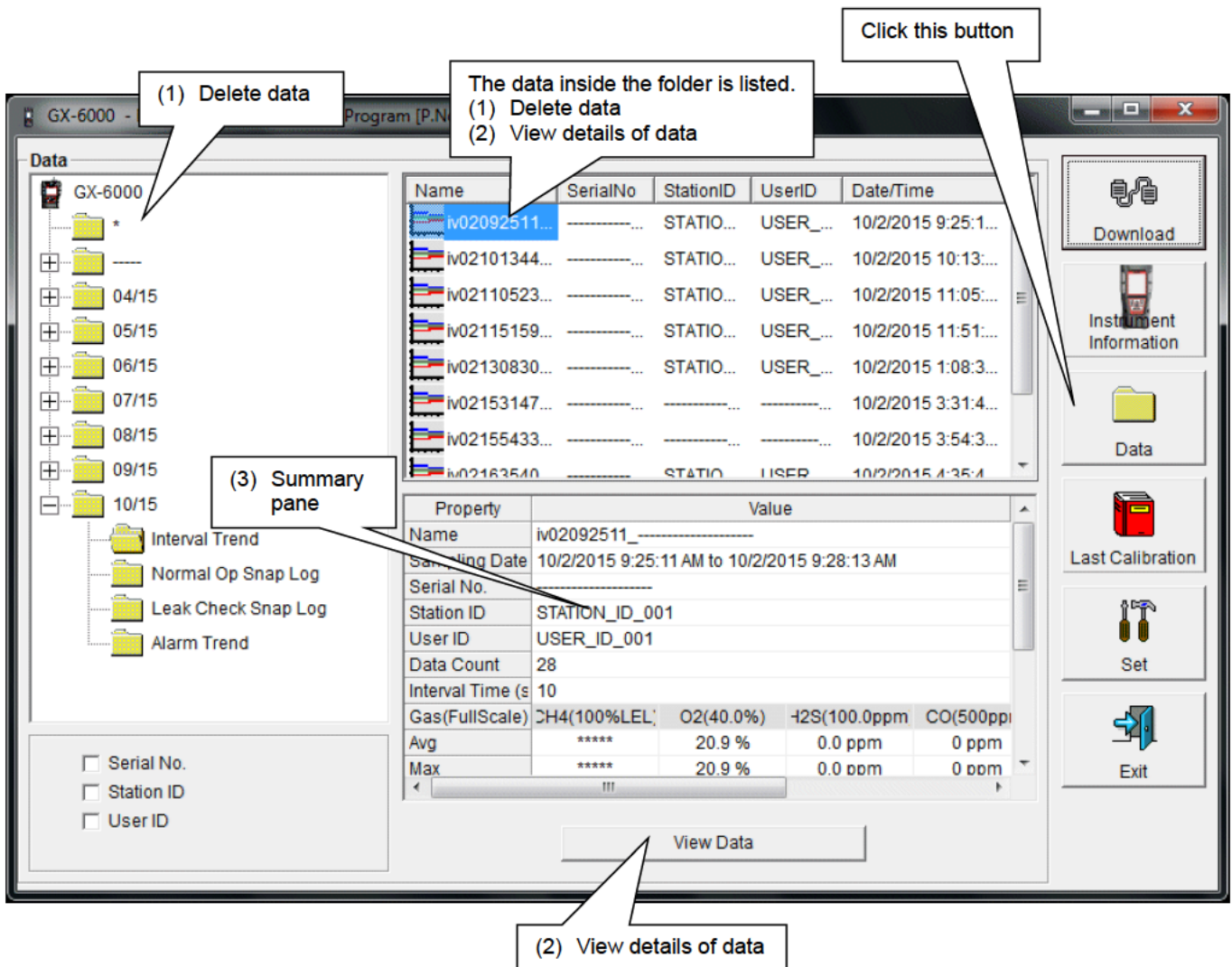
Gas	Warning and Alarm point			
	Warning	Alarm	STEL	TWA
CH4(100%LEL)	10	50	----	----
O2(40.0%)	19.5	23.5	----	----
H2S(100.0ppm)	5.0	30.0	15.0	10.0
CO(500ppm)	25	50	200	25
VOC(6000ppm)	400.0	600.0	60.0	42.0
----(---)	----	----	----	----

Details :

- Gas : Measured gas name
- Warning : Concentration at first alarm setpoint
- Alarm : Concentration at second alarm setpoint
- STEL : Concentration at STEL alarm setpoint
- TWA : Concentration at TWA alarm setpoint

3-3. Data screen

Click the "Data" button at the right side of the screen to switch to the following screen and view the list of downloaded data.



The operation of this screen is similar to the Windows Explorer. However, the following operations are not supported.

1. Rename data.
2. Move the data to another location.

Folders are displayed in an Explorer-like manner, with serial numbers, station IDs, and User IDs displayed hierarchically in this order.

Folders and data names are formed under the following rules.

Folder name: 03/11 = Data of March 2011.

File name: 22111930_3EB = Interval trend, 22nd day, 11:19:30 (Start date and time of logging)

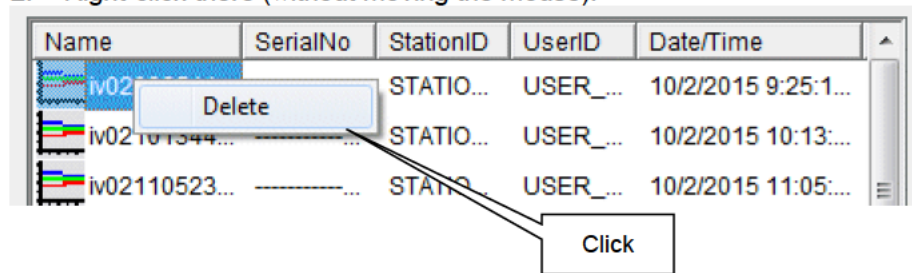
a|26150419_3EB = Alarm trend 26th day, 15:04:19 (Date and time of alarm occurrence)

The limit of data items to be stored in each folder depends on the memory limit of the PC. However, to maintain response speed, back up data files at least once a year. See "4. Data Maintenance".

3-3-1. Delete data.

- **Delete**

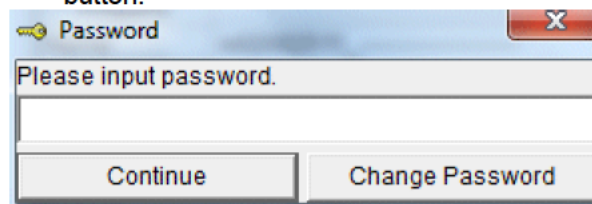
1. Click to select the data or folder to delete.
2. Right-click there (without moving the mouse).



- **Input password**

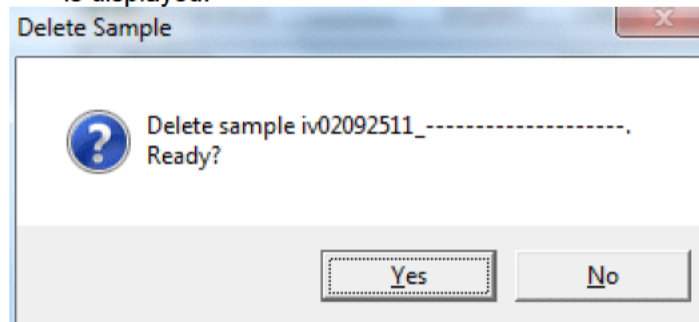
The Delete menu is displayed. Click "Delete".

1. The "Password" dialog is prompted. Enter the password and press the "Continue" button.



CAUTION : When "Continue" is pressed without entering the password, the delete operation is canceled.

2. When "Continue" is pressed with an appropriate password, the following message is displayed.



Click the "Yes" button to delete the data.

Click the "No" button to cancel the deletion of data.

3-3-2. View details of data

- **View data**

1. Click the data to be viewed in detail. Check that the summary of the data is displayed in the summary pane, and click the "View Data" button.

or

2. Double-click the data to be viewed in detail.

For details on how to use the data details screen, see "3-4. Data View screen".

3-3-3. Summary pane

● Details

When the selected data is a normal data, the summary of the data is displayed.
Interval trend

Property	Value			
Name	iv02092511_-----			
Sampling Date/Tim	10/2/2015 9:25:11 AM to 10/2/2015 9:28:13 AM			
Serial No.	-----			
Station ID	STATION_ID_001			
User ID	USER_ID_001			
Data Count	28			
Interval Time (sec)	10			
Gas(FullScale)	CH4(100%LEL)	O2(40.0%)	H2S(100.0ppm)	CO(500ppm)
Avg	*****	20.9 %	0.0 ppm	0 ppm
Max	*****	20.9 %	0.0 ppm	0 ppm
Max Date/Time	*****	10/02 09:25:11	10/02 09:25:11	10/02 09:25:11
Min	*****	20.7 %	*****	*****
Min Date/Time	*****	10/02 09:28:14	*****	*****
Warning	10 %LEL	19.5 %	10.0 ppm	25 ppm

- Name : Name of data
- Sampling Date/Time : Start and end of sampling date/time
- Serial No./Station ID/User ID : Status of the GX-6000 main unit
- Data Count : Number of sampled data
- Interval Time (sec) : Sampling interval (sec)

- Gas(FullScale) : Gas (full scale)
- Avg : Average value of gas
- Max : Maximum value of gas data
- Max Date/Time : Date/time when the maximum value is logged
- Min : Minimum value of gas data
- Min Date/Time : Date/time when the minimum value is logged
- Warning : First alarm setpoint
- Alarm : Second alarm setpoint
- STEL : STEL alarm setpoint
- TWA : TWA alarm setpoint

Alarm events

DateTime	Ch	Gas	Event
7/24/2015 11:09:03 AM	2	O2(40.0%)	OVER
7/24/2015 11:09:03 AM	2	O2(40.0%)	ALARM
7/23/2015 11:17:36 AM	5	VOC(6000ppm)	WARNING
7/22/2015 9:57:26 AM	2	O2(40.0%)	ALARM
7/22/2015 9:57:26 AM	2	O2(40.0%)	OVER
7/16/2015 10:38:52 AM	2	O2(40.0%)	WARNING
7/16/2015 10:38:52 AM	1	CH4(100%LEL)	WARNING
7/15/2015 5:29:37 PM	2	O2(40.0%)	WARNING
...	Total	44 Datas	

- DateTime : Date and time when the event occurred
- Gas : Naturally occurring or produced gas
- Event : Event type

Alarm trend

Property	Value			
Name	al02092512_-----			
Alarm Date/Time	10/2/2015 9:25:12 AM			
Serial No.	-----			
Station ID	STATION_ID_001			
User ID	USER_ID_001			
Data Count	720			
Interval Time (sec)	5			
Gas(FullScale)	CH4(100%LEL)	O2(40.0%)	H2S(100.0ppm)	CO(500ppm)
Value	*****	20.9 %	0.0 ppm	0 ppm
Warning	10 %LEL	19.5 %	10.0 ppm	25 ppm
Alarm	50 %LEL	23.5 %	30.0 ppm	50 ppm
STEL	*****	*****	15.0 ppm	200 ppm
TWA	*****	*****	10.0 ppm	25 ppm

- Name : Name of data
- Alarm Date/Time : Date/time when the alarm is triggered
- Serial No./Station ID/User ID : Status of the GX-6000 main unit
- Data Count : Number of sampled data
- Interval Time (sec) : Sampling interval
- Gas(FullScale) : Gas (full scale)
- Value : Concentration when the alarm is triggered
- Warning : First alarm setpoint
- Alarm : Second alarm setpoint
- STEL : STEL alarm setpoint
- TWA : TWA alarm setpoint

Calibration history

DateTime	Gas	Before	After
7/16/2015 3:27:06 PM	CH4(100%LEL)	----	----
7/16/2015 3:27:06 PM	O2(40.0%)	----	----
	---(--)	----	----
	---(--)	----	----
	---(--)	----	----
7/15/2015 11:00:33 AM	CH4(100%LEL)	48 %LEL	48 %LEL
7/15/2015 11:00:33 AM	O2(40.0%)	12.1 %	12.1 %
	---(--)	----	----
	---(--)	----	----
	---(--)	----	----
...	Total	7	Datas

- DateTime : Date and time when the event occurred
- Gas : Gas
- Before : Concentration before calibration
- After : Concentration after calibration

Trouble events

DateTime	Ch	Gas/Body	Event
8/21/2015 1:08:44 PM	2	O2(40.0%)	Fail(iSen.)
8/19/2015 2:49:16 PM	2	O2(40.0%)	Fail(iSen.)
8/19/2015 2:49:12 PM	2	O2(40.0%)	Fail(iSen.)
7/18/2015 3:10:19 PM	-	Body	Fail(Li-ion)
7/14/2015 6:44:00 PM	-	Body	Fail(FLOW)
5/29/2015 3:23:10 PM	-	Body	Fail(FLOW)
5/27/2015 1:51:17 PM	-	Body	Fail(FLOW)
5/25/2015 11:47:32 AM	-	Body	Fail(FLOW)
...	Total	34 Datas	

DateTime : Date and time when the event occurred
 Gas/Body : Naturally occurring or produced gas, or the GX-6000 main unit (Body)
 Event : Event type

Bump test

DateTime	Gas	Test Result	Concentration	Judge
10/6/2015 4:24:09 PM	CH4(100%LEL)	50 %LEL	50 %LEL	PASS
10/6/2015 4:24:09 PM	O2(40.0%)	12.1 %	12.0 %	PASS
10/6/2015 4:24:09 PM	H2S(100.0ppm)	25.0 ppm	25.0 ppm	PASS
10/6/2015 4:24:09 PM	CO(500ppm)	51 ppm	50 ppm	PASS
	----(---)	----	----	
10/6/2015 4:03:53 PM	CH4(100%LEL)	0 %LEL	50 %LEL	FAIL
10/6/2015 4:03:53 PM	O2(40.0%)	20.0 %	12.0 %	FAIL
10/6/2015 4:03:53 PM	H2S(100.0ppm)	0.0 ppm	25.0 ppm	FAIL
10/6/2015 4:03:53 PM	CO(500ppm)	0 ppm	50 ppm	FAIL
	----(---)	----	----	
...	Total	53	Datas	

DateTime : Date and time when the event occurred
 Gas : Gas
 Test Result : Test result concentration
 Concentration : Test gas concentration
 Judge : Test judgment

Normal measurement, snap log

Property	Value			
Name	ss02155735_-----			
Sampling Date/Time	10/2/2015 3:57:35 PM			
Serial No.	-----			
Station ID	-----			
User ID	-----			
----	----			
----	----			
Gas(FullScale)	CH4(100%LEL)	O2(40.0%)	H2S(100.0ppm)	CO(500ppm)
Concentration	0 %LEL	20.9 %	0.0 ppm	0 ppm

- Name : Name of data
- Sampling Date/Time : Recorded date
- Serial No./Station ID/User ID : Status of the GX-6000 main unit
- Gas(FullScale) : Gas (full scale)
- Concentration : Gas concentration of the recorded date/time

Leak check, snap log

Property	Value	
Name	lk08111148_-----	
Sampling Date/Time	10/8/2015 11:11:48 AM	
Serial No.	-----	
Station ID	STATION_ID_001	
User ID	USER_ID_001	
----	----	
----	----	
Gas(FullScale)	CH4(1000ppm)	CO(500ppm)
BASE	0 ppm	0 ppm

- Name : Name of data
- Sampling Date/Time : Recorded date
- Serial No./Station ID/User ID : Status of the GX-6000 main unit
- Gas(FullScale) : Gas (full scale)
- BASE : Gas concentration of the recorded date/time

3-4. Data View screen

This screen displays the details of each data in a table or a graph.

(1) Switch between table and graph

(2) Output to a printer

(3) Save to a file

(4) To view data summary simultaneously

The screenshot shows the 'Data View(Interval Trend)' window. At the top, there are radio buttons for 'Table' (selected), 'Graph', 'Event Only', and 'Condensed'. To the right are buttons for 'Print', 'Export', 'Summary', and 'Return'. The main area is a table with columns: No, Date/Time, :H4(100%LEL), O2(40.0%), 2S(100.0ppm), CO(500ppm), OC(6000ppm), and ---(--). The table contains 23 rows of data with various gas concentrations and alarm status (e.g., ALARM, WARNING, CAL ON, -ALARM, -WARNING, NORMAL, Fail(BUMP)). On the right side, there is a vertical toolbar with icons for Download, Instrument Information, Data, Last Calibration, Set, and Exit.

- Event Only : Displays event data only.
- Condensed : Displays data which shows some change in sample data.



CAUTION

Graph is not available when the number of samples is five or less.
In the table for the Alarm Trend data, the data where the alarm occurred is painted in red.

Among the event data, when the mouse cursor is pointed to WARNING, ALARM, or OVER, the cursor changes to the following.

When in this state, clicking the cell triggers a search for the corresponding trend data. If it exists, it can be displayed in a separate screen.



In the case of WARNING, ALARM, OVER

The separate screen displayed in the case of WARNING, ALARM, OVER.
Click the Return button to turn off the screen.

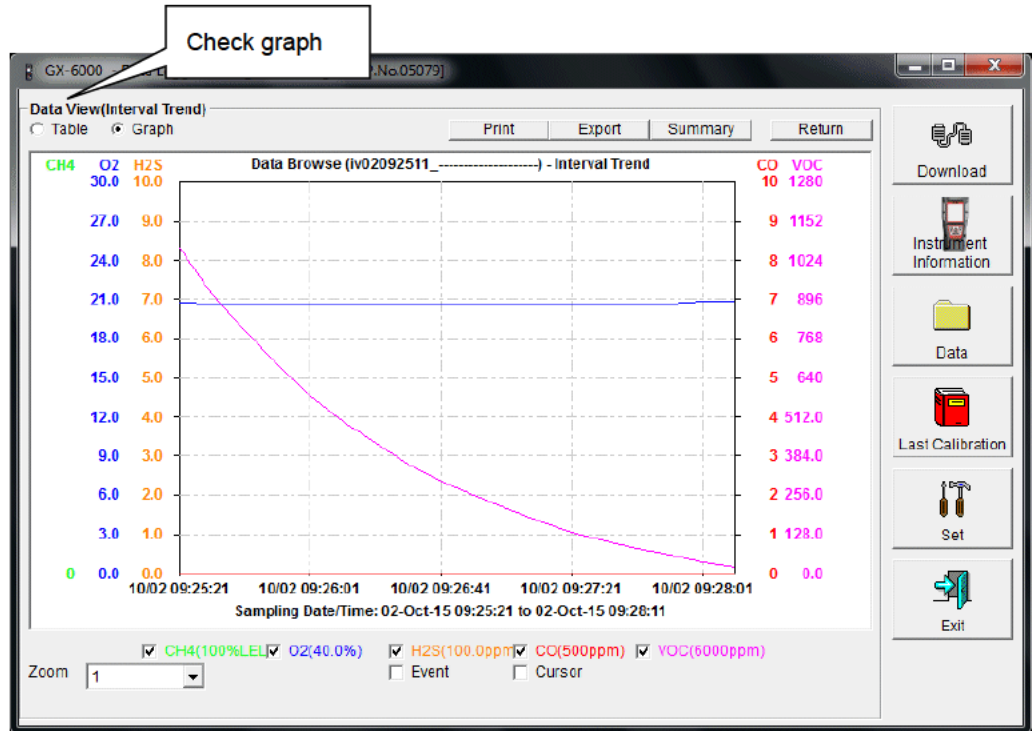
This screenshot shows a detailed view of the alarm data. The table has columns: No, Date/Time, :H4(100%LEL), O2(40.0%), 2S(100.0ppm), CO(500ppm), OC(6000ppm), and ---(--). The data is filtered to show only rows where an alarm occurred, which are highlighted in red. For example, row 359 shows an ALARM at 10/20/2015 9:24:17 AM with OC(6000ppm) at 1100 ppm.

* In the table for the Alarm Trend data, the data where the alarm

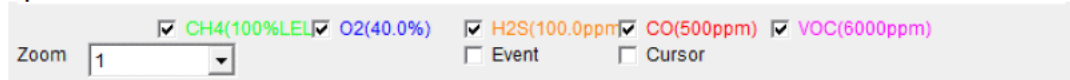
3-4-1. Switch between table and graph views

- Switch to graph view

1. From the "Table" and "Graph" radio buttons at the top left of the screen, select "Graph".



Use checkboxes and a combo box at the bottom of the screen to perform various operations on the view.



Checkboxes (gas name) in the first line: Select these boxes to toggle on/off each gas data.

Zoom combo box: Use this box to select the magnification ratio of the horizontal axis, according to the number of samples.

Event checkbox: Select this box to display event information markers, such as alarms.

Cursor checkbox: Select this box to display a cursor on the graph.



CAUTION

The maximum value of the graph's vertical axis is automatically adjusted based on the following definitional equations.

When the maximum value of data without event is "x", if full scale is 10 or above, the equation will be $Y_{max} = \{int(x / 10) + 1\} * 10$. If full scale is below 10, the equation will be $Y_{max} = \{int(x) + 1\}$, where "int" means to round off the decimal part.



CAUTION

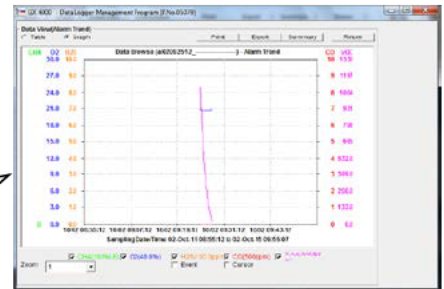
A graph is not displayed unless there are five or more normal concentration data. Data that contains only events cannot be drawn as a graph, because no concentration data is included.

Among the event data, when the mouse cursor is pointed to WARNING, ALARM, or OVER, the cursor changes to the following. When in this state, clicking the graph triggers a search for the corresponding trend data. If it exists, it can be displayed in a separate screen.



In the case of WARNING, ALARM, OVER

The separate screen displayed in the case of WARNING, ALARM, OVER. Click the "Return" button to turn off the screen.

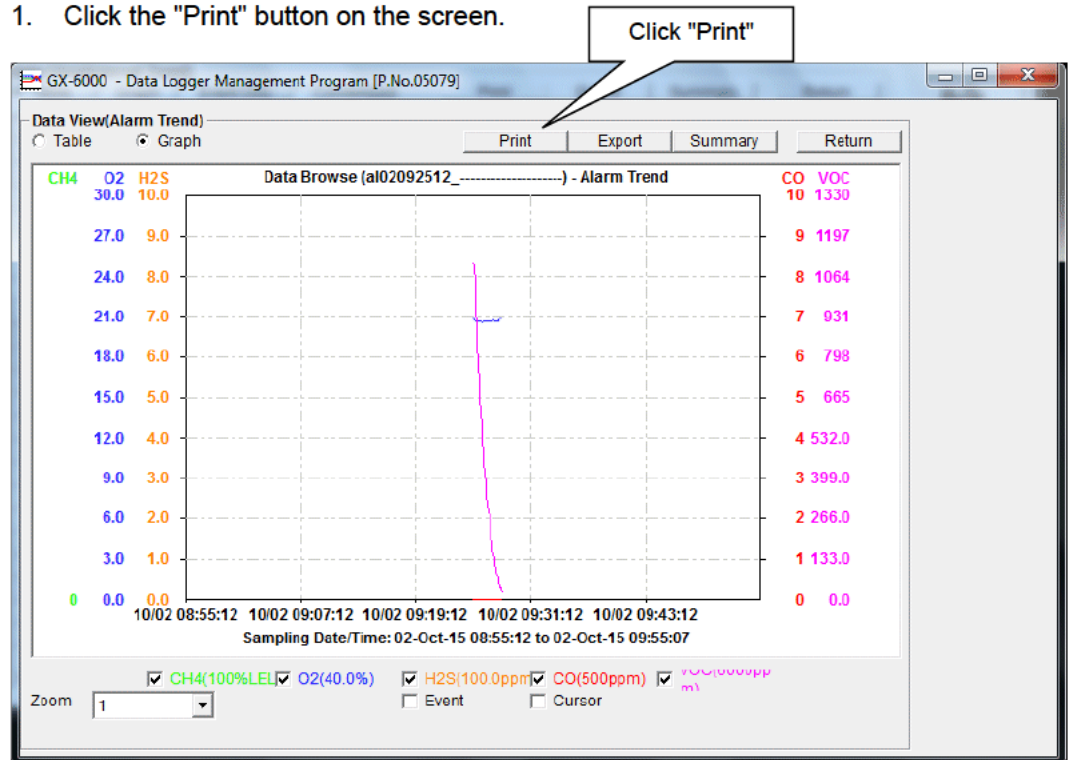


3-4-2. Output to a printer

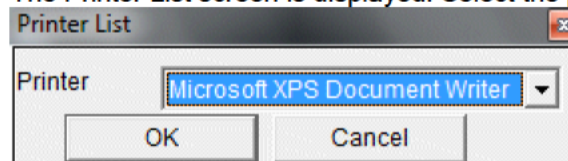
● Print

The content currently displayed on the Data View screen can be output to a printer.

1. Click the "Print" button on the screen.



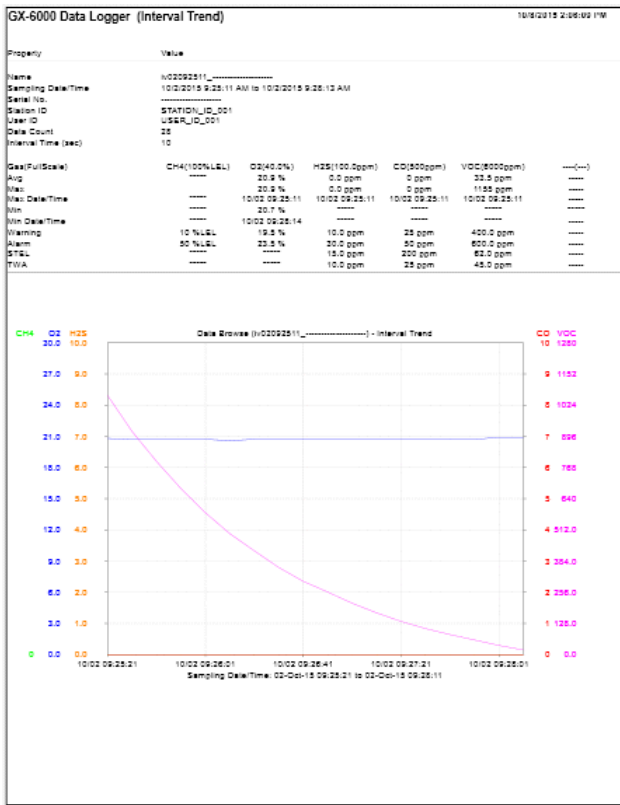
The Printer List screen is displayed. Select the printer to use and click the "OK" button.



Click the "OK" button to start the printout.

Click the "Cancel" button to cancel the printout and return to the previous screen.

Printout example (graph printout)



Printout example (table printout)

GX-6000 Data Logger (Interval Trend)
 10/02/2015 2:06:20 PM

Property Value

Name: W0202211
 Sampling Date/Time: 10/02/2015 9:25:11 AM to 10/02/2015 9:26:13 AM
 Serial No.:
 Station ID: STATION_ID_001
 User ID: USRR_ID_001
 Data Count: 25
 Interval Time (sec): 10

Gas(FullScale)	CH4(100%LEL)	O2(40.0%)	H2S(100.0ppm)	CO(500ppm)	VOC(5000ppm)	----	----
Avg	20.9 %	0.0 ppm	0 ppm	0 ppm	33.5 ppm	----	----
Max	20.9 %	0.0 ppm	0 ppm	0 ppm	1150 ppm	----	----
Min	20.7 %	----	----	----	----	----	----
Warning	10 %LEL	19.5 %	10.0 ppm	25 ppm	400.0 ppm	----	----
Alarm	50 %LEL	33.5 %	30.0 ppm	50 ppm	500.0 ppm	----	----
STL	----	----	15.0 ppm	200 ppm	50.0 ppm	----	----
TWA	----	----	10.0 ppm	25 ppm	45.0 ppm	----	----

No	Date/Time	CH4(100%LEL)	O2(40.0%)	H2S(100.0ppm)	CO(500ppm)	VOC(5000ppm)	----	----
1	10/02/2015 9:25:12 AM	----	----	----	----	----	----	ALARM
2	10/02/2015 9:25:12 AM	----	----	----	----	----	----	WARNING
3	10/02/2015 9:25:16 AM	CAL ON	CAL ON	CAL ON	CAL ON	CAL ON	CAL ON	CAL ON
4	10/02/2015 9:25:16 AM	----	----	----	----	----	----	-ALARM
5	10/02/2015 9:25:16 AM	----	----	----	----	----	----	-WARNING
6	10/02/2015 9:25:16 AM	----	----	----	----	----	----	NORMAL
7	10/02/2015 9:25:21 AM	----	----	20.5 %	0.0 ppm	0 ppm	----	1064 ppm
8	10/02/2015 9:25:21 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	216 ppm
9	10/02/2015 9:25:41 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	793 ppm
10	10/02/2015 9:25:51 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	651 ppm
11	10/02/2015 9:25:55 AM	----	----	----	----	----	----	Fail(LUMP)
12	10/02/2015 9:26:01 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	551.2 ppm
13	10/02/2015 9:26:11 AM	----	----	20.6 %	0.0 ppm	0 ppm	----	453.2 ppm
14	10/02/2015 9:26:21 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	453.8 ppm
15	10/02/2015 9:26:31 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	355.2 ppm
16	10/02/2015 9:26:36 AM	----	----	----	----	----	----	Fail(LUMP)
17	10/02/2015 9:26:41 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	305.8 ppm
18	10/02/2015 9:26:51 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	256.2 ppm
19	10/02/2015 9:27:01 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	210.5 ppm
20	10/02/2015 9:27:10 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	161.2 ppm
21	10/02/2015 9:27:11 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	111.2 ppm
22	10/02/2015 9:27:21 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	135.2 ppm
23	10/02/2015 9:27:31 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	107.2 ppm
24	10/02/2015 9:27:41 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	51.7 ppm
25	10/02/2015 9:27:51 AM	----	----	20.7 %	0.0 ppm	0 ppm	----	52.8 ppm
26	10/02/2015 9:27:51 AM	CAL OFF	CAL OFF	CAL OFF	CAL OFF	CAL OFF	CAL OFF	CAL OFF
27	10/02/2015 9:28:01 AM	----	----	20.9 %	0.0 ppm	0 ppm	----	21.8 ppm
28	10/02/2015 9:28:11 AM	----	----	20.9 %	0.0 ppm	0 ppm	----	15.5 ppm

Printout example (calibration history)

GX-6000 Data Logger (Calibration History)
 10/02/2015 2:06:44 PM

Property Value

Serial No.: S49010021RN
 Station ID:
 User ID:
 Last Download: 10/02/2015 2:22:17 PM

No	Date/Time	CH1	CH2	CH3	CH4	CH5	CH6
1	1/16/2015 3:27:09 PM	CH4(100%LEL)	O2(40.0%)	----	----	VOC(5000ppm)	----
	Before	----	----	----	----	51.3 ppm	----
	After	----	----	----	----	101.0 ppm	----
2	1/16/2015 11:00:33 AM	CH4(100%LEL)	O2(40.0%)	----	----	VOC(5000ppm)	----
	Before	45 %LEL	12.1 %	----	----	----	----
	After	45 %LEL	12.1 %	----	----	----	----
3	5/25/2015 3:28:57 PM	CH4(100%LEL)	O2(40.0%)	----	----	VOC(5000ppm)	----
	Before	1 %LEL	21.2 %	----	----	84.0 ppm	----
	After	----	----	----	----	101.0 ppm	----
4	5/25/2015 11:47:13 AM	CH4(100%LEL)	O2(40.0%)	----	----	VOC(5000ppm)	----
	Before	45 %LEL	12.1 %	----	----	----	----
	After	45 %LEL	12.1 %	----	----	----	----

Printout example (alarm events)

GX-6000 Data Logger (Alarm Event)
 10/02/2015 2:07:17 PM

Property Value

Serial No.: S49010021RN
 Station ID:
 User ID:
 Last Download: 10/02/2015 2:22:15 PM

No	Date/Time	Ch	Gas	Event
1	7/24/2015 11:02:03 AM	2	O2(40.0%)	OVER
2	7/24/2015 11:02:03 AM	2	O2(40.0%)	ALARM
3	7/23/2015 11:17:28 AM	5	VOC(5000ppm)	WARNING
4	7/23/2015 9:37:28 AM	2	O2(40.0%)	ALARM
5	7/23/2015 9:37:28 AM	2	O2(40.0%)	OVER
6	7/16/2015 10:25:52 AM	2	O2(40.0%)	WARNING
7	7/16/2015 10:25:52 AM	1	CH4(100%LEL)	WARNING
8	7/16/2015 9:26:37 PM	2	O2(40.0%)	WARNING
9	7/16/2015 4:25:34 PM	1	CH4(100%LEL)	WARNING
10	7/16/2015 4:25:30 PM	2	O2(40.0%)	WARNING
11	7/16/2015 4:24:05 PM	1	CH4(100%LEL)	WARNING
12	7/16/2015 4:24:01 PM	2	O2(40.0%)	WARNING
13	7/16/2015 4:23:22 PM	1	CH4(100%LEL)	WARNING
14	7/16/2015 4:22:21 PM	2	O2(40.0%)	WARNING
15	5/25/2015 1:01:01 PM	1	CH4(100%LEL)	WARNING
16	5/25/2015 1:01:55 PM	2	O2(40.0%)	WARNING
17	5/27/2015 10:56:15 AM	1	CH4(100%LEL)	WARNING
18	5/27/2015 10:56:17 AM	2	O2(40.0%)	WARNING
19	5/28/2015 11:04:28 AM	1	CH4(100%LEL)	ALARM
20	5/28/2015 11:03:25 AM	2	O2(40.0%)	WARNING
21	5/28/2015 11:03:25 AM	1	CH4(100%LEL)	WARNING
22	5/28/2015 1:37:14 PM	2	O2(40.0%)	WARNING
23	5/28/2015 10:32:19 AM	1	CH4(100%LEL)	WARNING
24	5/28/2015 10:32:17 AM	2	O2(40.0%)	WARNING
25	5/21/2015 1:32:56 PM	1	CH4(100%LEL)	ALARM
26	5/21/2015 1:32:50 PM	1	CH4(100%LEL)	WARNING
27	5/21/2015 1:32:49 PM	2	O2(40.0%)	WARNING
28	5/20/2015 11:22:32 AM	2	O2(40.0%)	WARNING
29	5/20/2015 11:22:32 AM	1	CH4(100%LEL)	WARNING

Printout example (bump test)

GX-6000 Data Logger (Bump Test)
 10/02/2015 2:08:57 PM

Property Value

Serial No.:
 Station ID: STATION_ID_001
 User ID: USRR_ID_001
 Last Download: 10/02/2015 12:15:37 PM

No	Date/Time	CH1	CH2	CH3	CH4	CH5	CH6
1	10/02/2015 4:24:29 PM	CH4(100%LEL)	O2(40.0%)	H2S(100.0ppm)	CO(500ppm)	----	----
	Test Result	50 %LEL	12.1 %	25.0 ppm	51 ppm	----	----
	Concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm	----	----
	Judge	PASS	PASS	PASS	PASS	----	----
2	10/02/2015 4:03:53 PM	CH4(100%LEL)	O2(40.0%)	H2S(100.0ppm)	CO(500ppm)	----	----
	Test Result	0 %LEL	20.0 %	0.0 ppm	0 ppm	----	----
	Concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm	----	----
	Judge	FAIL	FAIL	FAIL	FAIL	----	----
3	10/02/2015 4:01:50 PM	CH4(100%LEL)	O2(40.0%)	H2S(100.0ppm)	CO(500ppm)	----	----
	Test Result	0 %LEL	20.0 %	0.0 ppm	50 ppm	----	----
	Concentration	50 %LEL	12.0 %	25.0 ppm	50 ppm	----	----
	Judge	FAIL	FAIL	FAIL	PASS	----	----

Printout example (trouble events)

GX-6000 Data Logger (Trouble Event) 10/8/2015 2:07:35 PM

Property Value

Serial No. 349010021RN

Station ID -----

User ID -----

Last Downloaded 10/2/2015 2:32:11 PM

No	Date/Time	Ch	Gas/Body	Event
1	5/21/2015 1:05:44 PM	2	O2(40.0%)	Fail(Sen.)
2	5/19/2015 2:49:16 PM	2	O2(40.0%)	Fail(Sen.)
3	5/19/2015 2:49:19 PM	2	O2(40.0%)	Fail(Sen.)
4	7/18/2015 3:10:19 PM	-	Body	Fail(LiIon)
5	7/14/2015 8:44:00 PM	-	Body	Fail(FLOW)
6	5/29/2015 3:23:10 PM	-	Body	Fail(FLOW)
7	5/27/2015 1:01:11 PM	-	Body	Fail(FLOW)
8	5/25/2015 11:47:32 AM	-	Body	Fail(FLOW)
9	5/22/2015 9:28:27 AM	-	Body	Fail(LiIon)
10	5/21/2015 9:28:21 PM	-	Body	Fail(LiIon)
11	5/19/2015 2:57:24 PM	4	NO2(9.00ppm)	Fail(Sen.)
12	5/19/2015 2:58:31 PM	4	NO2(9.00ppm)	Fail(Sen.)
13	5/19/2015 2:58:37 PM	4	NO2(9.00ppm)	Fail(Sen.)
14	5/19/2015 2:58:32 PM	4	NO2(9.00ppm)	Fail(Sen.)
15	5/19/2015 2:55:24 PM	4	NO2(9.00ppm)	Fail(Sen.)
16	5/19/2015 12:25:06 PM	-	Body	Fail(LiIon)
17	5/18/2015 1:24:46 PM	-	Body	Fail(FLOW)
18	5/18/2015 1:19:29 PM	-	Body	Fail(FLOW)
19	5/18/2015 1:15:45 PM	-	Body	Fail(FLOW)
20	4/28/2015 11:01:44 AM	6	CO2(8.00vol%)	Fail(Sen.)
21	4/28/2015 11:01:44 AM	5	CO2(8.00vol%)	Fail(Sen.)
22	4/28/2015 11:01:44 AM	2	O2(40.0%)	Fail(Sen.)

Printout example (normal measurement, snap log)

GX-6000 Data Logger (Normal Op Snap Log) 10/8/2015 2:07:35 PM

Property Value

Sampling Date/Time 10/2/2015 3:54:11 PM - 10/2/2015 4:01:22 PM

Serial No.

No	User ID	Station ID	Date/Time	CH4(100%)	O2(21.0%)	H2(1000ppm)	CO(500ppm)	HC(30.0vol%)	HC(14.0ppm)
1			10/2/2015 3:57:35 PM	0 %LEL	20.6 %	0.0 ppm	0 ppm	0 %LEL	0.0 ppm
2			10/2/2015 3:59:32 PM	0 %LEL	21.0 %	0.0 ppm	0 ppm	2.0 10%	0.0 ppm

Printout example(leak check, snap log)

GX-6000 Data Logger (Leak Check Snap Log) 10/8/2015 2:08:12 PM

Property Value

Sampling Date/Time 10/8/2015 11:10:29 AM - 10/8/2015 11:12:04 AM

Serial No.

No	User ID	Station ID	Date/Time	CH4(100ppm)	CO(500ppm)
1	USRR_ID_001	STATION_ID_001	BASE	10/8/2015 11:11:48 AM	0 ppm
2	USRR_ID_001	STATION_ID_001	PEAK	10/8/2015 11:11:55 AM	200 ppm
3	USRR_ID_001	STATION_ID_001	BASE	10/8/2015 11:12:03 AM	100 ppm
4	USRR_ID_001	STATION_ID_001	PEAK	10/8/2015 11:12:42 AM	500 ppm



Notes on printer settings

- (1) Detailed printer settings depend on the printer used. Please see the operation manual of the printer.
- (2) This program does not support Print Area setting. Therefore, usage such as printing only part of the selected data is not possible.
- (3) Copies can be changed only when the setting is available from the printer.
When the setting is changed in this way, the change affects other applications subsequently used. (For example, when Copies is changed to 2, a printout operation from another application might also result in two copies.)

If Print Setting is changed in this program, when a printout is required from another application, check Print Setting of that application.

3-4-3. Printing CALIBRATION REPORT

● CALIBRATION REPORT

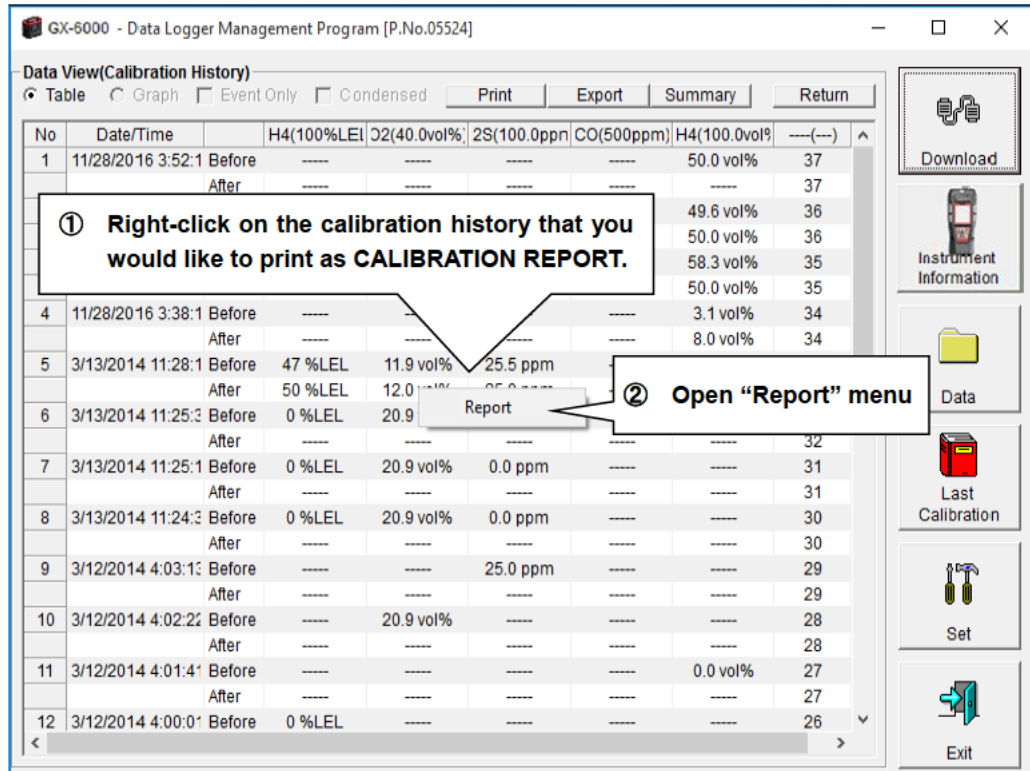
The instrument is capable of viewing or printing CALIBRATION REPORT for a passed calibration.

CALIBRATION REPORT					
ISSUE DATE	3/13/2014				
LABORATORY NAME					
LABORATORY ADDRESS					
REPORT NUMBER	923c6840-ec8b-4c25-ad35-7265ffab52bb-3				
GAS DETECTOR DATA	Serial	-----			
	Manufacturer	RIKEN KEIKI			
	Model	GX-8000			
	Station ID	ST-ID000			
	User ID	-----			
STANDARD OR REGULATION USED					
TRACEABILITY					
CALIBRATION RESULT	GAS	CH4(%LEL)	O2(vol%)	H2S(ppm)	
	Range	0-100%LEL	0-40.0vol%	0-100.0ppm	
	Gas concentration	50 %LEL	12.0 vol%	25.0 ppm	
	Reading before calibration	47 %LEL	11.9 vol%	25.5 ppm	
	Reading after calibration	50 %LEL	12.0 vol%	25.0 ppm	
	Result	PASS	PASS	PASS	
ENVIRONMENTAL CONDITIONS					
OBSERVATIONS					
EXECUTOR					

CAUTION:
Can not print CALIBRATION REPORT, if the calibration is not performed successfully.

●CALIBRATION REPORT window

1. To open “Report” menu, right-click on the calibration history that you would like to print.



CAUTION:

If a calibration has been performed successfully, values appear on the sheet : “Before” and “After”.

When a calibration has failed or NOT been performed, [.....] will appear. If all gas concentration shows [.....], you could not open CALIBRATION REPORT.

- Clicking "Report" menu opens CALIBRATION REPORT window. You can enter some information at this page.

Calibration Report							
					Align <input checked="" type="radio"/> Left <input type="radio"/> Center	Print	Close
ISSUE DATE	3/13/2014						
LABORATORY NAME							
LABORATORY ADDRESS							
REPORT NUMBER	923c6840-ec8b-4c25-ad35-7265ffab52bb-3						
GAS DETECTOR DATA	Serial	-----					
	Manufacturer	RIKEN KEIKI					
	Model	GX-6000					
	Station ID	ST-ID000					
	User ID	-----					
STANDARD OR REGULATION USED							
TRACEABILITY							
CALIBRATION RESULT	GAS	CH4(%LEL)	O2(vol%)	H2S(ppm)			
	Range	0-100%LEL	0-40.0vol%	0-100.0ppm			
	Gas concentration	50 %LEL	12.0 vol%	25.0 ppm			
	Reading before calibration	47 %LEL	11.9 vol%	25.5 ppm			
	Reading after calibration	50 %LEL	12.0 vol%	25.0 ppm			
	Result	PASS	PASS	PASS			
ENVIRONMENTAL CONDITIONS							
OBSERVATIONS							
EXECUTOR							

CAUTION:

The information you can enter is ;

- LABORATORY NAME
- LABORATORY ADDRESS
- STANDARD OR REGULATION USED
- TRACEABILITY
- ENVIRONMENTAL CONDITIONS
- OBSERVATIONS
- EXECUTER

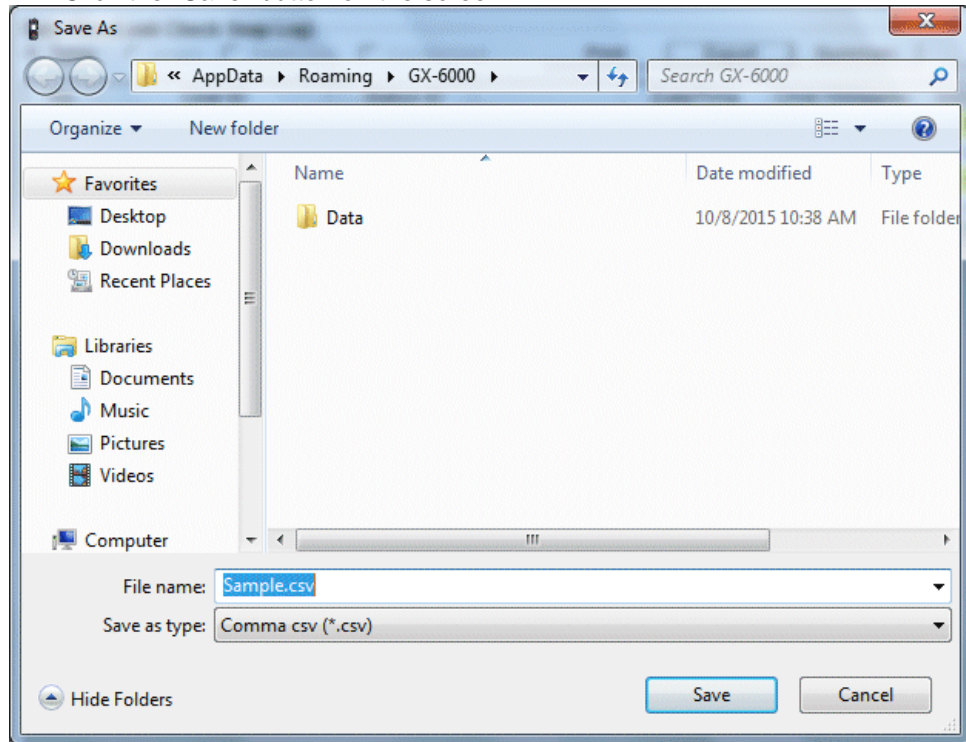
Information is saved if the calibration report is printed. If it is not printed and click "Close", the information entered is not saved.

A calibration report which is not entered any information shows most recent entered information from other CALIBRATION REPORT.

3-4-4. Save to a file

- **Save**

1. Click the "Save" button on the screen.



Specify the location and the file name, and click the "Save" button to store the data. Click the "Cancel" button to cancel the save operation.



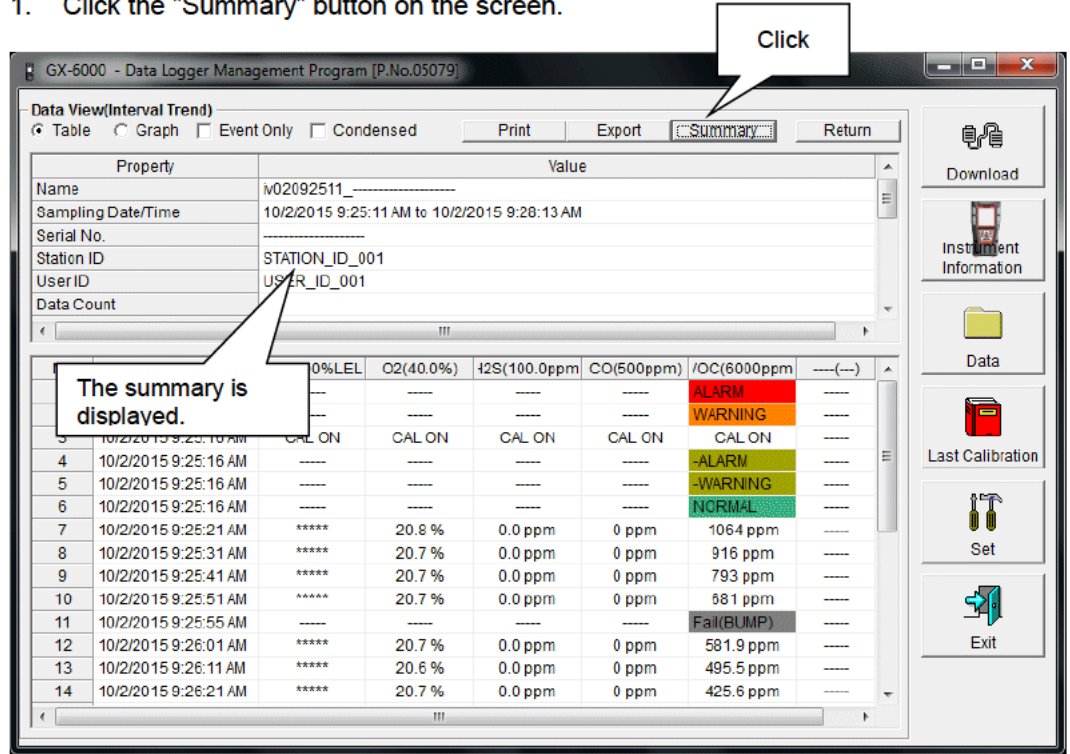
CAUTION

When a table is displayed, the content of the table is saved in the Excel CSV format. When a graph is displayed, the bitmap of the graph is saved.

3-4-5. To view data summary simultaneously

- **Summary display**

1. Click the "Summary" button on the screen.



When the "Summary" button is clicked while the summary is displayed, the summary display is cleared.

3-4-6. Table details

● **Event color**

The cells that display gas concentration are painted according to the event occurred at that time.

VOC(6000ppm)
ALARM
WARNING
OVER
OVER
OVER
OVER
OVER
OVER
STEL
OVER
OVER
CAL ON
-STEL
-ALARM
-WARNING
NORMAL
OVER
OVER
AIR

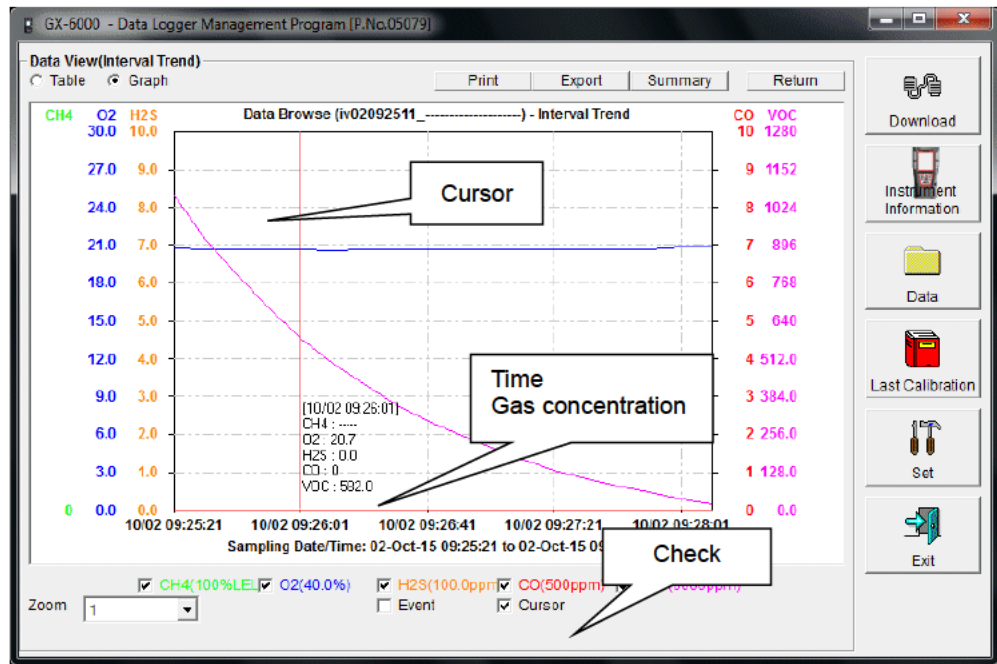
The cells are identified by background color.

- | | | |
|---------|----------------|-------------------------------|
| FAIL | : Gray | Fault |
| WARNING | : Orange | First alarm |
| ALARM | : Red | Second alarm |
| STEL | : Pink | STEL alarm |
| TWA | : Light purple | TWA alarm |
| NORMAL | : Deep green | Recovery from the above state |
| OVER | : Light red | Over full scale |

3-4-7. Graph details

● **Cursor**

1. Click the "Cursor" checkbox to display a cursor on the graph.

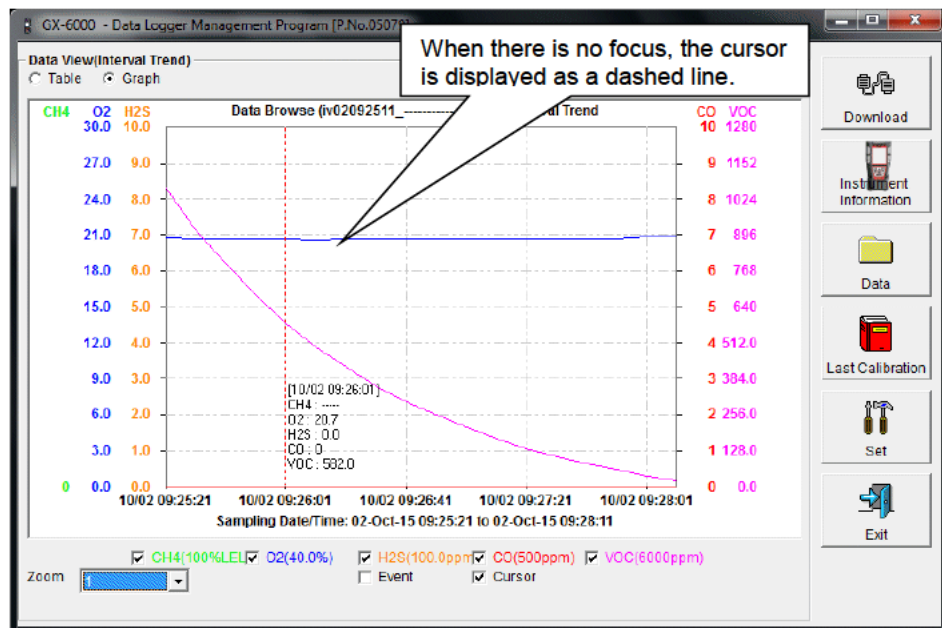


Use the left and right keys to move the cursor left and right, and the up and down keys to move the time and concentration views up and down. The Shift key can be used together to speed up the cursor.



CAUTION

Cursor operation is not available when a window irrelevant to the program is opened and the focus is moved outside the graph area. The cursor itself is displayed as a dashed line. To restore focus, click inside the graph area.



3-5. Last Calibration screen

The expiration dates of the data downloaded in the past can be checked. The bump test is displayed similarly.

The screenshot shows the GX-6000 Data Log software interface. It features two main data tables: 'Last Calibration' and 'Last Bump Test'. The 'Last Calibration' table has columns for No., SerialNo, UserID, StationID, CH4, O2, H2S, CO, and Last Dow. The 'Last Bump Test' table has columns for No., SerialNo, UserID, StationID, CH4, O2, H2S, CO, and Last Dow. A sidebar on the right contains buttons for Download, Instrument Information, Data, Last Calibration, Set, and Exit. Callouts provide instructions: (1) Change displayed (pointing to the 'Need Calibration' radio button), (2) Output to a printer (pointing to the 'Print' button), (3) Delete data and (4) Change password (pointing to the 'UserID' cell in the calibration table), and 'Click this button' (pointing to the 'Exit' button).

No.	SerialNo	UserID	StationID	CH4	O2	H2S	CO	Last Dow
3	69010102	USER_ID_	STATION_1	7/9/2015 3	7/9/2015 3	7/9/2015 3	7/9/2015 3	8/11/2015

No.	SerialNo	UserID	StationID	CH4	O2	H2S	CO	Last Dow
2	69010102	MANNY	VALVE 3	8/21/2015	8/21/2015	8/21/2015	8/21/2015	8/21/2015



CAUTION

This table is read-only. Modification of the table is not supported.

3-5-1. Change displayed contents

● **Expired data**

1. Click the "Need Calibration" radio button.

No.	SerialNo	UserID	StationID	H2S	CO	Last Dow				
3	569010102	USER_ID_	STATION_I	7/9/2015 3	7/9/2015 3	7/9/2015 3	7/9/2015 3	---	---	8/11/2015

Among the GX-6000 main units connected in the past (in other words, the main units from which Instrument Information data is downloaded), this table extracts and displays the records which have an expired calibration date.

● **List view**

1. Click the "Calibration Date" radio button.

No.	SerialNo	UserID	StationID	CH4	O2	H2S	CO	Last Dow		
1	-----	USER_ID_	STATION_I	10/6/2015	10/6/2015	10/6/2015	10/6/2015	-----	-----	10/8/2015
2	569010102	MANNY	VALVE 3	8/21/2015	8/21/2015	8/21/2015	8/21/2015	-----	8/21/2015	8/21/2015
3	569010102	USER_ID_	STATION_I	7/9/2015 3	7/9/2015 3	7/9/2015 3	7/9/2015 3	-----	-----	8/11/2015

Data for the GX-6000 main units connected in the past is listed. (Of the data with the same serial number, user ID, and Station ID, the newest data is displayed.)

● **Detailed view**

1. Click the "Calibration Record" radio button.

No.	SerialNo	UserID	StationID	Gas	Before	After	A.Cal.	Cal.Due(Days)
1	-----	USER_ID_001	STATION_ID_001	CH4	49	50	50	Remaining 88
				O2	12.2	12.0	12.0	Remaining 88
				H2S	24.5	25.0	25.0	Remaining 88
				CO	47	50	50	Remaining 88
2	569010102	MANNY	VALVE 3	CH4	50	50	50	Remaining 42
				O2	11.9	12.0	12.0	Remaining 42
				H2S	25.0	25.0	25.0	Remaining 42
				CO	49	50	50	Remaining 42
3	569010102	USER_ID_001	STATION_ID_001	SO2	4.40	5.00	5.00	Remaining 42
				CH4	50	50	50	New
				O2	12.0	12.0	12.0	New
				H2S	25.0	25.0	25.0	New

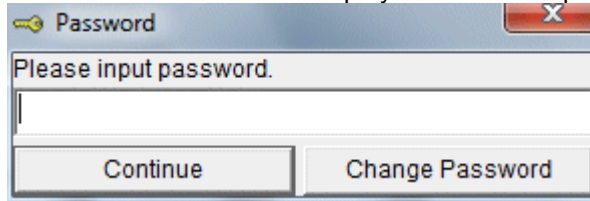
Data for GX-6000 main units connected in the past is listed in the same format as the Instrument Information screen.

For details on the displayed items, see "3-2. Instrument Information screen, (3) Calibration history information".

3-5-2. Output to a printer

- **Print**

The last calibration date of each unit can be printed out using Need Calibration or Calibration Date.
The Printer List screen is displayed. Select the printer to use and click the "OK" button.

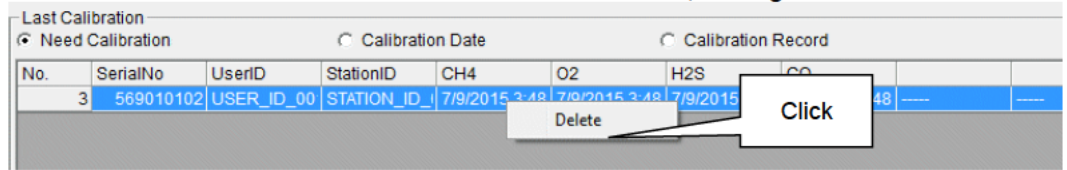


GX-6000 Data Logger (Last Calibration)								10/8/2015 2:14:35 PM
No.	SerialNo	UserID	StationID	CH4	O2	H2S	CO	
3	569010102	USER_ID_001	STATION_ID_001	7/9/2015 3:48:40 AM	7/9/2015 3:48:40 AM	7/9/2015 3:48:40 AM	7/9/2015 3:48:40 AM	---

3-5-3. Delete data

● Delete

1. Move the mouse to the data that needs to be deleted, and right-click the data.

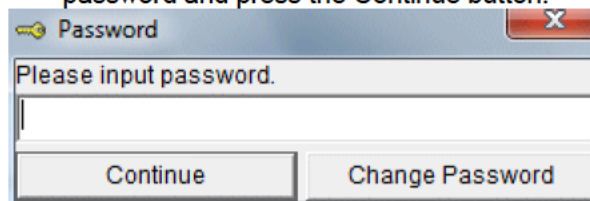


CAUTION

Deletion of data is available only in "Need Calibration" and "Calibration Date views". It is not available in the Calibration Record view.

● Input password

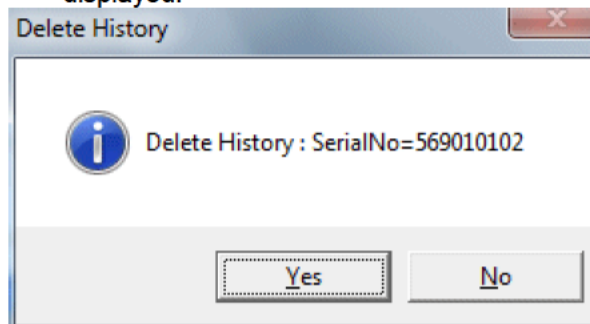
1. When the "Delete" button is clicked, the Password dialog is prompted. Enter the password and press the Continue button.



CAUTION

When "Continue" is pressed without entering the password, the delete operation is canceled.

2. When "Continue" is pressed with an appropriate password, the following message is displayed.

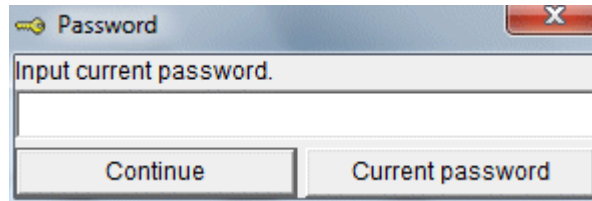


Click the "Yes" button to delete the data.
Click the "No" button to cancel the deletion of data.

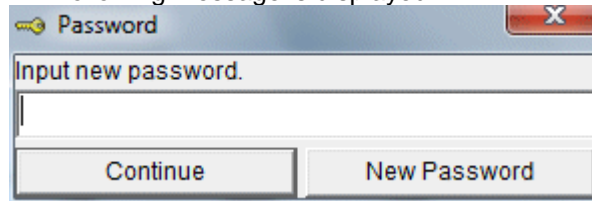
3-5-4. Change password

- **Input password**

1. Display the Password dialog in the same way as deleting the data, and click "Change Password".



2. Enter an appropriate password and click the "Current password" button. The following message is displayed.



3. Enter the new password and click the "New Password" button.
4. The Password dialog is prompted again. Enter the same new password and click "New Password".



Click "OK" to update the password.



CAUTION

The password immediately after installation is "RKI".

3-6. Set screen

In this screen, display settings of the screen and the detailed settings of the unit can be specified.

FontAnd Color

Serial No. (20 Characters) _____

Station ID (16 Characters) STATION_ID_001

User ID (16 Characters) USER_ID_001

Interval Trend Time (Sec) 10

PC Date/Time 10/8/2015 2:20:45 PM

GX-6000 Date/Time 10/8/2015 1:20:12 PM

Update Date/Time Set

Gas	Sensor		STEL	TWA		
	Warning					
CH4(100%LEL)	10			---	50	1
O2(40.0%)	19.5			---	12.0	2
H2S(100.0ppm)	5.0	30.0	15.0	10.0	25.0	3
CO(500ppm)	25	50	200	25	50	4



CAUTION

The data specified and/or changed must be sent to the GX-6000 main unit using the Update button.



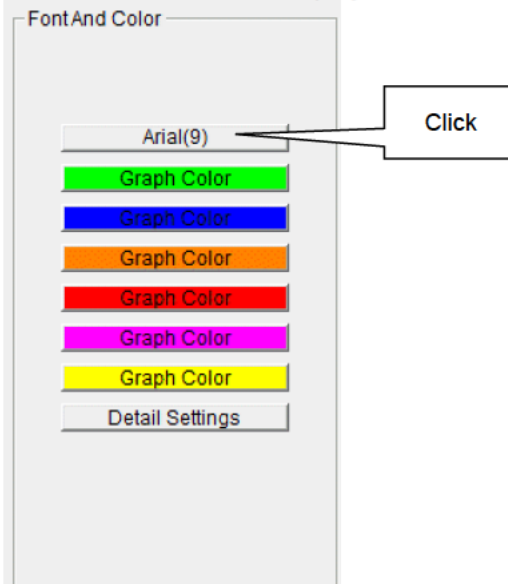
CAUTION

The font setting is applied on the next startup.

3-6-1. Change font and graph colors

- **Change the font**

1. Click the area that displays the font.



The font setting dialog is displayed. Specify an appropriate font.



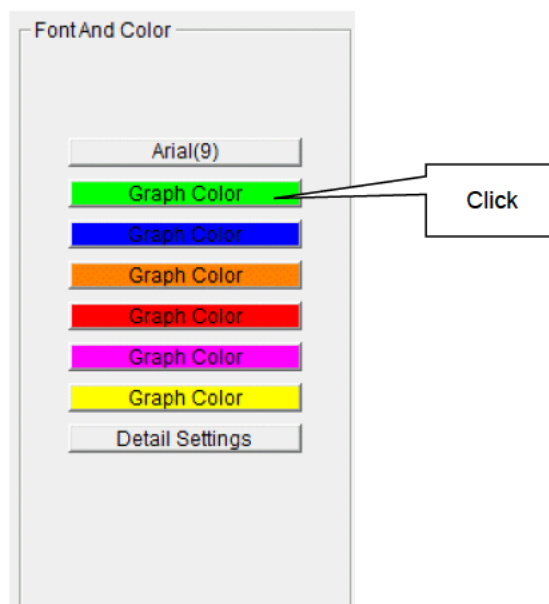
CAUTION

When an extremely large font is used, the screen might be hard to view.
This change will be effective on the next startup.

- **Change the graph color**

The display colors mapped for the gases in the graph can be changed.

1. Click the area that displays each gas.

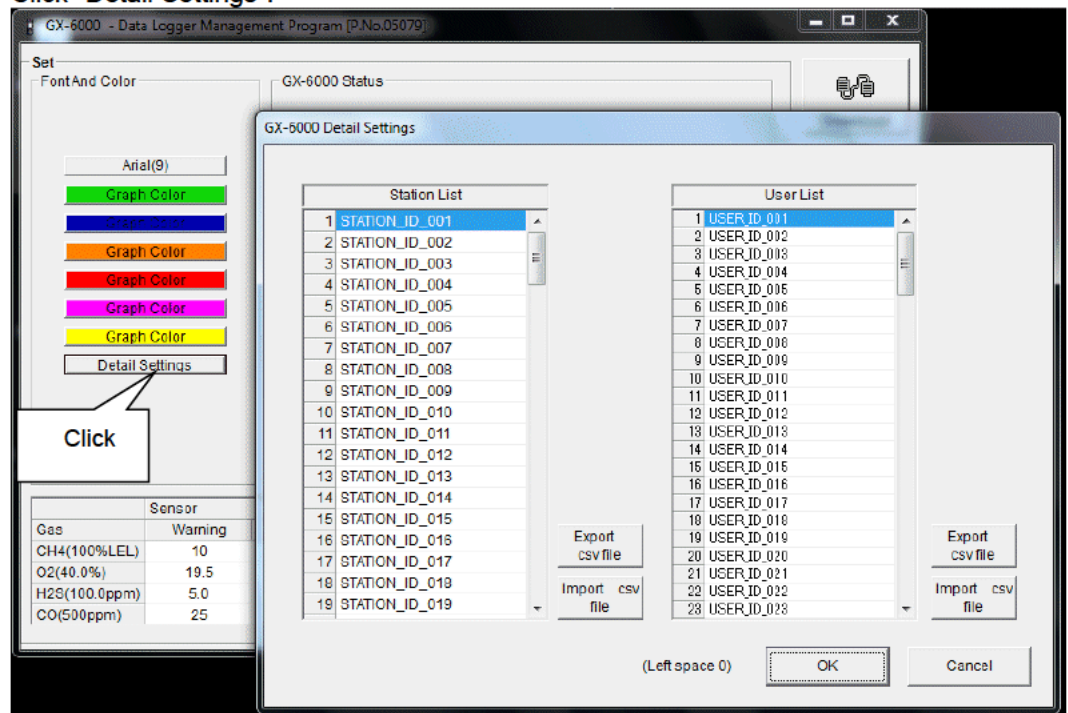


The color selection dialog is displayed. Specify an appropriate color.

3-6-2. Change status of the main unit

- Edit station/
user list

1. Edit the station/user ID list.
Click "Detail Settings".

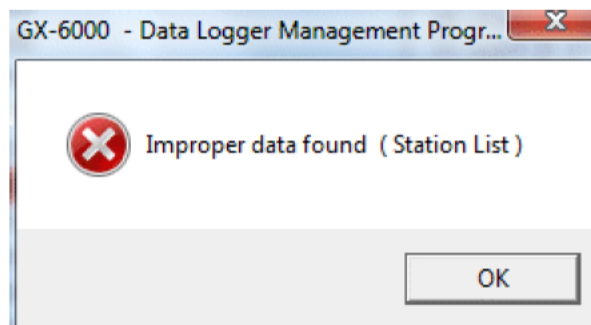


The edit dialog is displayed. The station list contains stations up to Number 128. Up to 16 characters of alphabets, numerics, spaces, hyphens and slashes can be entered.

Export csv file : The data is exported to a file. A text file is created using the "Number,data" format.

Import csv file : Data is loaded from a text file that follows the "Number,data" format. If the data contains unsupported letters, or the data is too long, the background color of the corresponding cells is changed to red.

* If any cells have a red background, **OK** cannot be selected.



- **Change**

2. In the status area, change the desired data.

The screenshot shows the 'GX-6000 Status' window. It contains the following fields and controls:

- Serial No. (20 Characters): A text input field with a dashed underline.
- Station ID (16 Characters): A dropdown menu showing 'STATION_ID_001'.
- User ID (16 Characters): A dropdown menu showing 'USER_ID_001'.
- Interval Trend Time (Sec): A dropdown menu showing '10'.
- PC Date/Time: A text input field showing '10/8/2015 2:20:45 PM'.
- GX-6000 Date/Time: A text input field showing '10/8/2015 1:20:12 PM'.
- Update: A button at the bottom left.
- Date/Time Set: A button at the bottom right.

The contents of Serial No. (20 characters) can be changed.

Interval Trend Time (Sec), Station ID (16 characters), and User ID (16 characters) can be selected and changed from the list.

The Date/Time Set button can be used to align the internal clock of the GX-6000 main unit (GX-6000 Date/Time) to the set time of the PC (PC Date/Time).



CAUTION

The date/time areas cannot be entered directly.



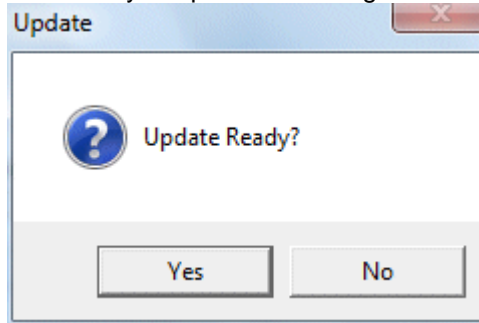
CAUTION

The settings of the GX-6000 main unit are not modified except Date/Time Set by this change. Make sure to click Update to send the change request process to the main unit.

3-6-3. Send updates to the GX-6000 main unit

- **Send updates**

1. Modify the places to change and click the "Update" button.



When the "Yes" button is clicked, the changes are sent to the GX-6000 main unit and stored there.

When the "No" button is clicked, update is canceled.



CAUTION

The changes cannot be undone. Before clicking "Update", it is possible to revert to the data stored in the main unit by clicking the Instrument Information button on the Download screen to download the instrument information data.

4

Data Maintenance

Depending on usage (such as loading data many times in a single day), the number of data might increase drastically. In such a case, it might be difficult just to find the desired data. In addition, there is a possibility of losing valuable data caused by an unexpected trouble of the PC.

To prepare for such unexpected events, a periodical backup of the data is recommended.

4-1. Details of data storage structure

Data is stored in the installation folder of the GX-6000 program.

- 1) File name: GX6000.mdb
File type: Microsoft Jet 3.6 database file
- 2) File name: Data
File type: Folder Trend data files are organized under year/month folders

4-2. Backup

Although it depends on usage, we recommend the data to be copied to another hard disk device or an auxiliary storage device (such as an MO drive or CD-R drive).

To restore data, copy it to the installation folder of the GX-6000 executable. The program searches for data on startup and the data will be available to view.

Operating Precautions

When using the program, take sufficient considerations on the following points:

- (1) When downloading data, check that GX-6000 is placed at an appropriate position. If the position is not appropriate, download cannot be performed properly.
- (2) When downloading, avoid similar operations using another application (for example, performing IR communication during data download).
- (3) Do not force-quit the program (for example, by using Ctrl + Alt + Del). This program saves setting parameters on the shutdown process to prepare for the next startup. Therefore, if the program is force-quit, the next startup might fail.
- (4) Do not modify a data file directly.

6

Troubleshooting

Symptoms	Causes	Solutions
Communication is not possible.	The position of the main unit is inappropriate. An obstacle is in the way.	Change the position of the main unit.
	There is another device that uses IR.	Turn off the other devices, or prevent its interference.
Error occurs during communication.	There is a disturbance light.	Eliminate the device that uses IR.
	The GX-6000 unit moved during communication.	Do not move the unit during communication.
Something is wrong in the communication data.	There is a disturbance light.	Eliminate the device that uses IR.

If an error still persists despite the above actions, please contact RIKEN KEIKI.

7

IrDA Specifications

7-1. About infrared communication

Communication with the main unit is performed via infrared communication (IrDA protocol).

Check that the computer to be used is capable of infrared communication.

Also, place the units so the infrared communication port of the main unit and the communication port of the PC directly face each other, and prevent interference of other lights.



CAUTION

This program can establish communication with the GX-6000 main unit only in an environment with IrDA enabled. Check that the PC has a built-in IrDA device, and that it is enabled.

If the computer does not have a built-in IrDA device (this applies to most desktop PC and some notebook PC), use a separately sold IrDA-USB converter.

7-2. Display of communication ready status

At the start of communication, the operating system recognizes existence of an infrared device and displays an icon on the task bar.

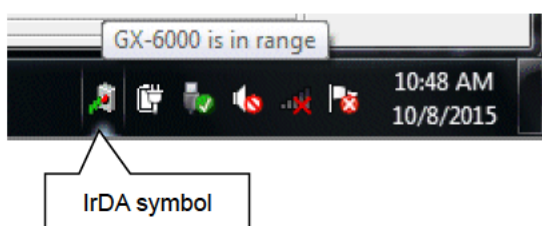
By that icon, the communication status can be understood to some extent.



CAUTION

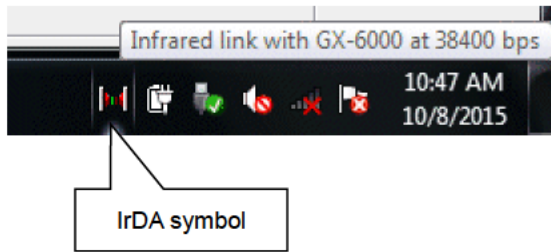
The displayed content might differ depending on the operating system and IrDA driver settings.

7-2-1. Task bar icon when the operating system recognizes GX-6000



The IrDA symbol is displayed, and when the cursor is pointed over the symbol, the message "GX-6000 is in range" is displayed.

7-2-2. Task bar icon when communication between the data logger program and the GX-6000 main unit is in progress



The IrDA symbol changes to an animation icon that shows communication, and when the cursor is pointed over the symbol, the message "Infrared link with GX-6000 at xxxx bps" is displayed.

* "xxxx" shows communication rate, which is normally 38400 bps.



CAUTION

Due to overhead in internal process of the GX-6000 main unit and/or the data logger program, there is little difference in overall communication time if the communication rate is 38400 bps or above. This is because a relatively long time is required to create data within the GX-6000 main unit and to analyze the downloaded data by the data logger program.

8

File Structure

This chapter explains the details about file contents at installation and during operation.

8-1. Current directory immediately after installation

File name	Details
GX6000.exe RklrDA11.ocx RKComm.ocx Filemove.avi	GX-6000 main unit Infrared communication component Serial communication component Animation file that shows that data download is in progress

8-2. Current directory during operation

File name	Details
GX6000.exe RklrDA11.ocx RKComm.ocx Filemove.avi	GX-6000 main unit Infrared communication component Serial communication component Animation file that shows that data download is in progress
GX6000.ini GX6000.dat GX6000.mdb Data Serial.log	GX-6000 initialization file File for data downloading Database file (Microsoft Jet 3.6 database) Save directory for trend data files Recording of data that flowed through communication port since startup of the program (for investigation and maintenance)



CAUTION

Files and directories below the double line are created after startup of the program.

9

Software Specifications

Name of product (name of program)	GX-6000 Data Logger Management Program
Model	SW-GX-6000(EX)
Executable file name	GX6000.EXE
Supported OS	Microsoft Windows 7 Windows 8 Windows 10
Program capacity	Main program: Approx. 4 MB/Library: Approx. 5.2 MB (Uses up to 40 MB of disk space on installation)
Communication of the main unit	Infrared (conforming to IrDA 1.1 protocol) Standard communication settings Baud rate: 38400 bps (maximum) Data bit: 8 bits Stop bit: 1 bit Parity: Even
Transfer time	Maximum 3 minutes (standard communication setting, with maximum amount of data)
Medium	One CD-ROM
Package contents	Operating Manual (this specification) Product warranty and registration card License agreement